

## **5.3.16 Visual Resources**

### ***5.3.16.1 Affected Environment***

#### **5.3.16.1.1 Area of Potential Effect.**

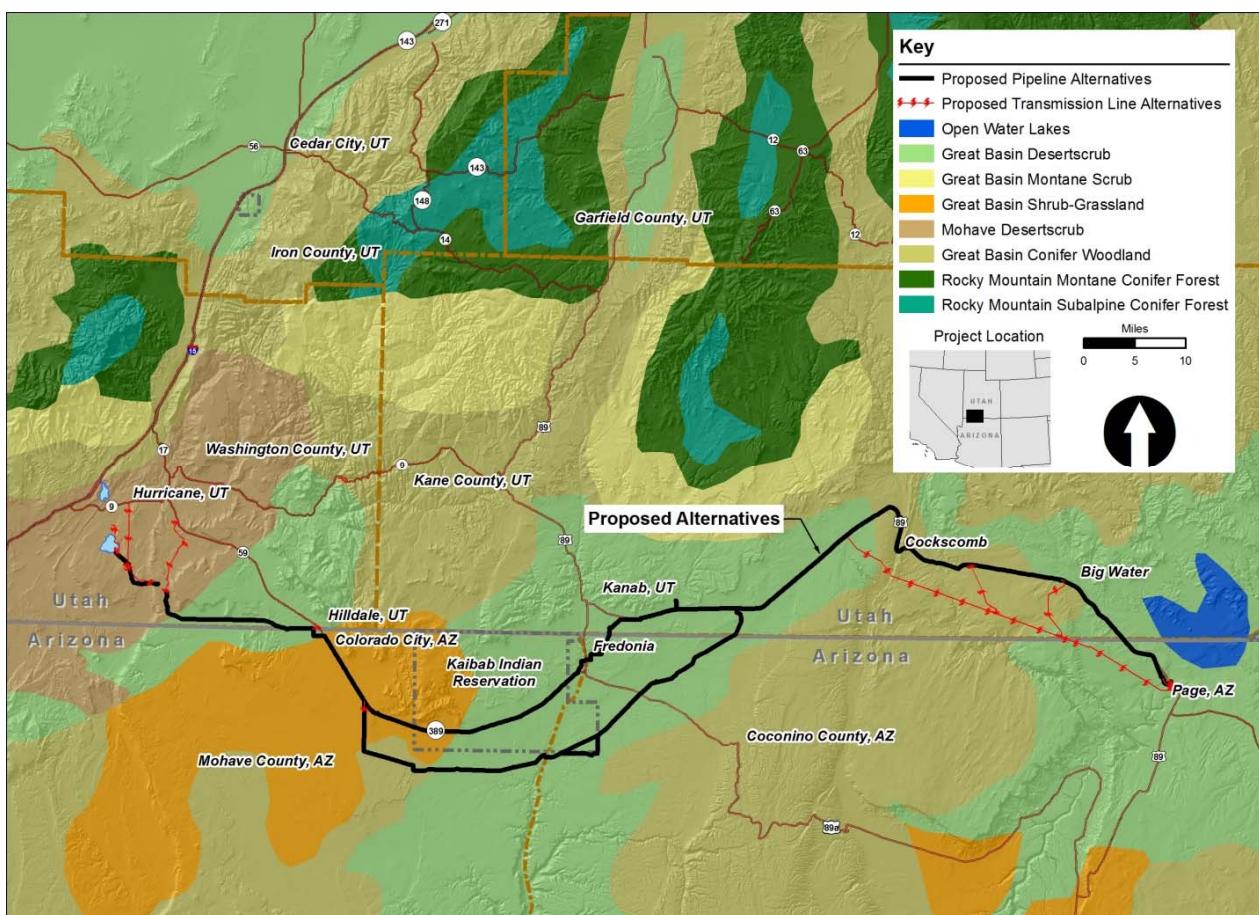
##### ***5.3.16.1.1.1 Regional Setting.***

The project area is located in southwestern Utah and northwestern Arizona, within an elevation range of approximately 2,900 to 5,400 feet above mean sea level. The project would begin near Glen Canyon Dam on the north side of Lake Powell in Page, Arizona, and generally follow Highway 89 to near Kanab, Utah. The project would extend southwest through Arizona and then back into Utah to the termination of the Lake Powell Pipeline portion near Hurricane, Utah.

The visual setting is influenced by the major landforms, geology and vegetation communities found along the project alignment. The project would be primarily located within the Colorado Plateau physiographic province, a generally high, flat region carved into soaring mesas, deeply incised plateaus, abrupt vertical escarpments, layered terraces, unique valleys, badlands, buttes, hills, dunes, rugged canyons, and isolated mountain range uplifts. The remainder of the project area would be within the Transition physiographic province. This area is characterized by a mixture of features from both the Colorado Plateau and the Basin and Range physiographic provinces. The Basin and Range features appearing in the Transition province consist of fault-tilted mountain ranges separated by broad sediment-filled basins (2009). The area of potential effect would begin approximately 0.35 mile north of Glen Canyon Dam, at the west edge of Lake Powell near Page, Arizona. The LPP Project would immediately split into two separate alignments: the pipeline would be located in the northern alignment, and the transmission lines would be located in the southern alignment. The alignments would proceed northwest over a wide bench eroded in soft Jurassic rocks that overlie the Navajo sandstone cliffs west of Lake Powell (Chronic 1983). The southern alignment would be located in the same land formations approximately 3 to 4 miles south of the northern alignment, along the existing Navajo-McCullough transmission line. The alignments would pass by layered sandstone cliff faces and talus slopes, sand dunes, candy-striped Chinle badlands and the Paria River—eventually reaching the East Kaibab monocline, as evidenced by the steeply tilted Triassic and Jurassic strata of the Cockscomb. Approximately five miles west of the Cockscomb, the southern alignment would join the northern alignment to form a single alignment. Continuing westward, the alignment would traverse Paunsaugunt Fault, at which point the alignment would be located closer to Vermilion Cliffs. The alignment would continue through the Telegraph Flat area near GSENM west boundary along Highway 89, where the alignments would split again. The Existing Highway Alternative would run parallel to Highway 389; the Proposed Action alignment would turn south then west around the southern edge of the Kaibab-Paiute Indian Reservation. The Southeast Corner Alternative alignment would cross through the southeastern corner of the Reservation. The various alternative alignments would converge west of the reservation and would then extend to The Divide landform before passing through Hurricane Cliffs, which delineate the Hurricane Fault and the edge of the Colorado Plateau (Chronic 1990). From this point, the alignments would extend westward to the existing Sand Hollow Reservoir.

The project would traverse several biotic communities, which are described below from east to west (Figure 5-189). The biotic communities along the proposed alignments appear in patterns based on elevation, orientation and precipitation. The eastern end of the project would begin in the Great Basin Desertsrub community. This community is associated with sagebrush, saltbush, winterfat, rabbitbrush, blackbrush, greasewood, Mormon tea, hopsage, horsebrush, yucca and a few cacti such as cholla, prickly pear, and hedgehog. The dominant species in this portion of the project are sagebrush and blackbrush, which begin in a low and stippled-to-sparse pattern. Moving westward, the vegetation quickly transitions

to a more evenly stippled pattern, and the general height of vegetation increases. The Great Basin Conifer Woodland community begins near milepost (MP) 5 on Highway 89 in Utah. This community is characterized by juniper and pinyon, along with an understory of Great Basin Desertsrub species such as sagebrush, rabbitbrush, winterfat, shadscale and blackbrush. The juniper and pinyon begin sparsely, becoming more dense and even near the Cockscomb. Near MP 32 on Highway 89 in Utah, the Great Basin Desertsrub community reappears and extends to approximately MP 18 on Highway 389. The dominant species in this area is sagebrush with a dense, even cover and transitions to a more sparse cover of shorter stature. The next community crossed by the project is the Great Basin Shrub-Grassland, which is typified by grasses such as blue grama, buffalo grass, Indian ricegrass, prairie junegrass, plains lovegrass, and alkali sacaton and by shrub and cactus species such as sagebrush, saltbush, winterfat, cholla, rabbitbrush, and snakeweed. The grasses become dominant in this area, with scattered sagebrush, pinyon, and juniper. The Great Basin Desertsrub community appears for the third time near MP 1 on SR 389 and generally consists of dense sagebrush stands with scattered to clumped pinyon and juniper. This community extends from Colorado City, through Canaan Gap and down Short Creek to the southwest corner of Little Creek Mountain. At this point, the biotic community transitions to Mojave desertsrub, which is associated with creosotebush, all-scale, brittlebush, desert holly, white burrobrush, shadscale and blackbrush (1994a). Species dominance in this area begins as blackbrush and snakeweed high atop Hurricane Cliffs and transitions to creosotebush below the cliffs.



**Figure 5-189**  
**Biotic Communities**

### **5.3.16.1.1.2 Cultural Context.**

The project would traverse four counties: Kane and Washington counties in Utah and Coconino and Mohave counties in Arizona. Approximately half of the land that the project alignments pass through is federally-owned and federally-managed, and the remaining land is under state, county, tribal, or private ownership. Of the federally-owned land, the majority is managed by the BLM. The project would be located within four BLM field offices (FO): Grand Staircase-Escalante National Monument (GSENM), Kanab, Arizona Strip, and St. George. BLM also manages the Vermilion Cliffs National Monument (VCNM) located in the Arizona Strip FO south of the GSENM. The NPS manages most of the remaining federal land, which is located within Glen Canyon National Recreation Area in addition to the Pipe Springs National Monument (PSNM). The Bureau of Reclamation manages a small parcel within Glen Canyon National Recreation Area, which is the proposed location for the intake pump station. State land within the project area includes Sand Hollow State Park, a major recreational draw in the Hurricane, Utah area. The Existing Highway Alternative alignment would cross the Kaibab-Paiute Indian Reservation; tribal land would account for less than 10 percent of the project area.

Three visitor centers and one welcome centers/rest areas are within the project area. The Carl Hayden Visitor Center and the GSENM Big Water Visitor Center are located along Highway 89 on the east end of the project. The various transmission line alignments lie north, west and south of the Carl Hayden Visitor Center, which is located directly west of Glen Canyon Dam in the Glen Canyon National Recreation Area. The pipeline alignment along Highway 89 in Utah would directly pass the GSENM Big Water Visitor Center, near MP 7.4, and the Paria Contact Station, near MP 20.7. The route of the Proposed Action would be located adjacent to the Fredonia Welcome Center/Rest Area, near MP 610.4 on Highway 89A in Arizona.

The project would also pass three designated trailheads. The Toadstools Trailhead, is located along Highway 89 in the Grand Staircase-Escalante National Monument. Toadstools Trailhead is located in the Rimrocks area near MP 19.3. There are also Great Western Trailheads along Highway 89, near MP 43.2. One is on the north side of the highway and the other is on the south side, within GSENM.

Several interpretive sites, monuments and stopping areas are near the project. Beginning on the east end of the project, GSENM passage zone wayside stop is at the Cottonwood Road junction near MP 17.7. There is an interpretive site on House Rock Valley Road visible from Highway 89, near MP 25.5, and then the project would pass by the Old Paria Historic Marker at the intersection of the Road to Paria and Highway 89, near MP 30.6. The project would subsequently traverse past the Vermilion Cliffs Highway Interpretive Site, along SR389 near MP 8.7.

There is one designated scenic overlook in the project area. The Wahweap Scenic Overlook is approximately 0.6 mile northeast of the project, where the project would parallel Highway 89 near MP 552.3. The overlook offers visitors panoramic views of Lake Powell and its surrounding landscape and rock formations. Many undesignated scenic overlooks also exist throughout the project alignments, including those from Shinarump Cliffs and from Little Creek Mountain. The undesignated overlooks are generally accessible from a variety of unpaved roads and trails.

A variety of other important features are also located near the project alignments, including five designated WAs: Paria Canyon–Vermilion Cliffs (directly south of the proposed transmission line alignments); Cottonwood Point (north and east of the project alignment, near Colorado City, Arizona); Canaan Mountain (north of the project, near Colorado City, Arizona); Cottonwood Canyon (northwest of the project, near Sand Hollow State Park); Cottonwood Forest (also northwest of the project, near Sand Hollow State Park).

Five WSAs are located near the project: Wahweap (north of the project, near East Clark Bench); Cockscomb (north of the project, just east of the Cockscomb landform); Paria-Hackberry (north of the project, near the Old Paria Historic Marker); Canaan Mountain (north of the project, near Colorado City, Arizona); and Cottonwood Canyon (northwest of the project, near Sand Hollow State Park). Other notable features adjacent to the project are the Pipe Spring and Vermilion Cliffs National Monuments.

While the majority of land along the project is undeveloped, communities of highly variable architectural character are found throughout the project area, ranging from sparse rural ranching areas to higher-density urban areas. The largest city is St. George, Utah with a population of approximately 78,500, followed by Hurricane, Utah and Page, Arizona, with populations of approximately 15,000 and 7,500, respectively. Colorado City, Arizona and Kanab, Arizona, have populations of approximately 4,800 and 4,000, respectively. The smaller communities along the alignments including Big Water, Fredonia, Hildale, LaVerkin, Leeds, Toquerville, Kanarraville and New Harmony—are all have less than 2,800 residents. The majority of the populated areas are located in the western third of the project area because the remaining portion of the project area is dominated by federal and tribal land.

Aside from the general cultural modifications associated with the urban and rural developments, an assortment of human-made features and modifications associated with roads, utilities and resources are also visible throughout the project area. Road-related features include bridges, road cuts and fills, traffic interchanges, Jersey barriers, streetlights, directional and informational signage, fences and guardrails. Features associated with utilities and resources include dams; reservoirs; sewage ponds; water tanks and towers; quarries; a power plant; cell and radio towers; electrical substations; a water capture area; and a variety of power lines, poles and towers.

The project would follow several key transportation corridors for both commercial and recreational travel. Highway 89 extends from Flagstaff through Page and Kanab before continuing past Glacier National Park to the Canadian border. The project would parallel Highway 89 for more than 60 miles, crossing the roadway twice in the Cockscomb (approximately MP 24.4 and MP 25.4) and once near the proposed water treatment facility in Kanab (approximately MP 54.6). A portion of the Existing Highway Alternative would follow SR 389 for over 30 miles, with one crossing near MP 0.9. The project alignments would also cross several other transportation corridors, including SR 59 and Highway 89A. The Proposed Action alignment would cross Highway 89A within a portion of the roadway designated as the Fredonia–Vermilion Cliffs Scenic Road. The Existing Highway Alternative, conversely, would cross Highway 89A in Fredonia where the road is not designated as a scenic road. Many recreational and tourist attractions in Arizona and Utah are accessible from these transportation corridors, including Glen Canyon National Recreation Area, GSENM, Bryce Canyon National Park, Zion National Park, Dixie National Forest, Paria Canyon–Vermilion Cliffs Wilderness, VCNM, SPNM, Kaibab National Forest and Sand Hollow State Park.

### **5.3.16.1.2 Overview.**

#### ***5.3.16.1.2.1 Existing Visual Resources.***

The landscape components of landform, water features, vegetation types and cultural modifications provide the basis for the definition of visual resources. The character of the existing visual resources in the area of potential effect varies because of the changes in landscape elements and their patterns. Changes in pattern elements are associated with the visual attributes of objects—form, line, color and texture. The ability to discern these elements primarily depends on distance. For this assessment, the foreground distance zone is defined as the area up to 0.5 mile from the project, and the middleground distance zone is the area from 0.5 mile to 5.0 miles.

### ***5.3.16.1.2.2 Existing Visual Character.***

In evaluating the project area, notable changes in the dominant terrain, vegetation and land use resulted in the identification of 21 distinct Visual Assessment Units (VAUs) within the project area. The visual character of the project area is described by these units from east to west (Table 5-132 and Figures 5-190, 5-191, 5-192, 5-193, 5-194, and 5-195).

**Table 5-132**  
**Visual Assessment Unit Descriptions**

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Visual Assessment Unit	Landform/Topography/Water	Vegetation	Other Features
1. Lake Powell/Glen Canyon (Arizona)	<ul style="list-style-type: none"> <li><b>Form:</b> Rolling, undulating terrain; steep, abrupt cliff faces</li> <li><b>Line:</b> Undulating, horizontal, angled, rounded, vertical</li> <li><b>Color:</b> Brown, reddish orange and grayish white; deep blue-green water of lake and river surface</li> <li><b>Texture:</b> Fine sandy soils; coarse, striated, blocky rock formations</li> <li><b>Distinct Natural Features Visible:</b> Glen Canyon, Colorado River, Tower Butte, Navajo Mountain and Antelope Point/Island</li> </ul>	<ul style="list-style-type: none"> <li><b>Representative Species:</b> Sage, snakeweed, blackbrush, prickly pear, Mormon tea and grasses</li> <li><b>Height:</b> Low (approx. 0 to 5 feet high)</li> <li><b>Texture/Pattern:</b> Medium in foreground; medium to fine in middleground; sparse to stippled</li> <li><b>Colors:</b> Greens and blue-grays; seasonal colors</li> </ul>	<ul style="list-style-type: none"> <li><b>Enclosure:</b> Weak to none</li> <li><b>Views:</b> Primarily vast and panoramic</li> <li><b>Land Use:</b> Highly variable; primarily recreational but also residential to commercial and light industrial</li> <li><b>Ownership:</b> Mostly federal (National Park Service [NPS], Glen Canyon National Recreation Area [GCNRA]); also Bureau of Reclamation (Reclamation), state and private</li> <li><b>Distinct Cultural Modifications:</b> Glen Canyon Dam and Bridge; Lake Powell; Carl Hayden Visitor Center; Glen Canyon Substation; transmission lines/towers; Page, Arizona, roads and parking facilities; signage; Arizona Department of Transportation (ADOT) maintenance facility; small residential developments</li> <li><b>Adjacent Scenery:</b> Greatly enhances overall visual quality</li> <li><b>Scarcity:</b> Distinctive within the region</li> </ul>
2. Wahweap (Arizona /Utah)	<ul style="list-style-type: none"> <li><b>Form:</b> Flat to rolling terrain; high, steep cliff faces and buttes; narrow washes</li> <li><b>Line:</b> Horizontal, undulating; angled, vertical in cliffs</li> <li><b>Color:</b> Beige, reddish orange and grayish white</li> <li><b>Texture:</b> Fine, sandy soils; coarse, blocky cliffs and buttes</li> <li><b>Distinct Natural Features Visible:</b> Wahweap Bay, Stud Horse Point and Lone Rock, Ferry Swale</li> </ul>	<ul style="list-style-type: none"> <li><b>Representative Species:</b> Sage, snakeweed, blackbrush, prickly pear, Mormon tea and grasses</li> <li><b>Height:</b> Low</li> <li><b>Texture/Pattern:</b> Medium in foreground; medium to fine in middleground; stippled, sometimes dense</li> <li><b>Colors:</b> Greens and blue-grays; seasonal colors</li> </ul>	<ul style="list-style-type: none"> <li><b>Enclosure:</b> Weak to moderate</li> <li><b>Views:</b> Mostly panoramic</li> <li><b>Land Use:</b> Primarily open and undisturbed; minor rural development, utility corridor</li> <li><b>Ownership:</b> Mostly federal (NPS, GCNRA, BLM; some Reclamation); also state and private</li> <li><b>Distinct Cultural Modifications:</b> Small, rural development, signage, billboards, fences and transmission lines and towers</li> <li><b>Adjacent Scenery:</b> Greatly enhances overall visual quality</li> <li><b>Scarcity:</b> Interesting, but fairly common in the region</li> </ul>
3. Big Water (Utah)	<ul style="list-style-type: none"> <li><b>Form:</b> Rolling terrain; high cliffs to north, within 1.5 miles of alignment; medium-sized rock formations and cliffs to south in foreground and middleground; narrow washes</li> <li><b>Line:</b> Horizontal, flowing; vertical, angled, undulating in cliff and rock forms</li> <li><b>Color:</b> Beige, reddish orange and grayish white</li> <li><b>Texture:</b> Fine, sandy soils; coarse, striated, blocky cliffs and buttes; vertical cliff fissures; angled talus slopes</li> <li><b>Distinct Natural Features Visible:</b> Straight Cliffs, Jacobs Tank Draw, Haycock and Mustard Points, and Three Pigs</li> </ul>	<ul style="list-style-type: none"> <li><b>Representative Species:</b> Sage, blackbrush, saltbush, Mormon tea, yucca, snakeweed and grasses; scattered pinyon and juniper</li> <li><b>Height:</b> Low (approx. 0 to 5 feet high) to medium (approx. 5 to 20 feet high)</li> <li><b>Texture/Pattern:</b> Medium to coarse; relatively even, stippled</li> <li><b>Colors:</b> Greens and blue-grays; seasonal colors</li> </ul>	<ul style="list-style-type: none"> <li><b>Enclosure:</b> Moderate to weak</li> <li><b>Views:</b> Panoramic views; expansive to east toward Lake Powell</li> <li><b>Land Use:</b> Primarily undeveloped; some rural development</li> <li><b>Ownership:</b> Primarily state; also private and federal (Reclamation)</li> <li><b>Distinct Cultural Modifications:</b> Businesses and residential development (Big Water, Utah), information/direction signs, billboards, fences, utility poles and water tank</li> <li><b>Adjacent Scenery:</b> Greatly enhances overall visual quality</li> <li><b>Scarcity:</b> Interesting, but fairly common in the region</li> </ul>
4. East Clark Bench (Utah)	<ul style="list-style-type: none"> <li><b>Form:</b> Flat to slightly rolling terrain; high cliffs to north in background; flat to rolling terrain to south</li> <li><b>Line:</b> Horizontal, flowing; vertical in distant cliffs</li> <li><b>Color:</b> Brown/beige, reddish orange and grayish white</li> <li><b>Texture:</b> Fine, sandy soils; striated, blocky coarse cliffs</li> <li><b>Distinct Natural Features Visible:</b> East Clark Bench, Buck Tank Draw and Cedar Hollow</li> </ul>	<ul style="list-style-type: none"> <li><b>Representative Species:</b> Sage, blackbrush, saltbush, Mormon tea, yucca, snakeweed and high occurrence of grasses; scattered pinyon and juniper</li> <li><b>Height:</b> Low to medium</li> <li><b>Texture/Pattern:</b> Medium to dense grasses in foreground; stippled to south ; relatively consistent <b>Colors:</b> Greens and blue-grays; seasonal colors such as buff-colored grasses</li> </ul>	<ul style="list-style-type: none"> <li><b>Enclosure:</b> Weak</li> <li><b>Views:</b> Open, panoramic views; views to west terminated by Cockscomb Formation and Buckskin Mountain</li> <li><b>Land Use:</b> Mostly undeveloped; small, isolated rural growth</li> <li><b>Ownership:</b> Primarily state; also private and federal (Bureau of Land Management [BLM])</li> <li><b>Distinct Cultural Modifications:</b> Transmission lines, two rural residential developments, information/direction signs, utility poles, fences and guardrails</li> <li><b>Adjacent Scenery:</b> Enhances overall visual quality</li> <li><b>Scarcity:</b> Common in the region</li> </ul>

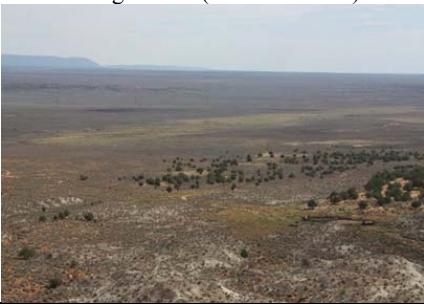
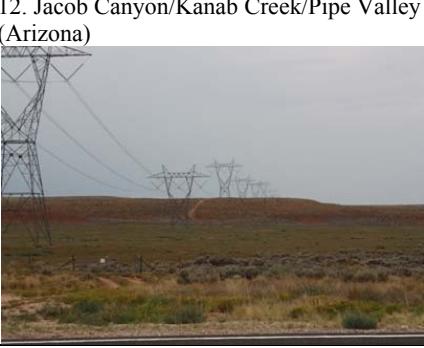
**Table 5-132**  
**Visual Assessment Unit Descriptions**

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Visual Assessment Unit	Landform/Topography/Water	Vegetation	Other Features
5. Rimrocks/Paria River Valley (Utah) 	<ul style="list-style-type: none"> <li><b>Form:</b> Paria River Valley consisting of gently rolling terrain; candy-striped badland rock formations; and blocky, striated cliffs and buttes</li> <li><b>Line:</b> Horizontal, flowing; angled, undulating, rounded in badlands, with horizontal striations</li> <li><b>Color:</b> Brown/beige, orange, red, and grayish white</li> <li><b>Texture:</b> Fine to medium sandy soils; coarse rock formations</li> <li><b>Distinct Natural Features Visible:</b> Paria River, Rimrocks, Cockscomb Formation (in foreground, to the west), Long Canyon and West and East Coves</li> </ul>	<ul style="list-style-type: none"> <li><b>Representative Species:</b> Sage, saltbush, Mormon tea, yucca, snakeweed and grasses; scattered pinyon and juniper; poplar and tamarisk along river</li> <li><b>Height:</b> Low to medium</li> <li><b>Texture/Pattern:</b> Medium to fine in foreground and in dominant stands of sage and grass; coarse in areas of dark-green pinyon and juniper; irregular to stippled</li> <li><b>Colors:</b> Greens and blue-grays; seasonal colors</li> </ul>	<ul style="list-style-type: none"> <li><b>Enclosure:</b> Moderate</li> <li><b>Views:</b> Primarily limited to foreground and middleground</li> <li><b>Land Use:</b> Mostly undeveloped</li> <li><b>Ownership:</b> Primarily federal (BLM, Grand Staircase-Escalante National Monument [GSENM]); also private</li> <li><b>Distinct Cultural Modifications:</b> Paria Contact Station, gravel pit, residential dwellings, agricultural fields, information/direction signs, billboards, and highway utility poles, fences and guardrails</li> <li><b>Adjacent Scenery:</b> Greatly enhances overall visual quality</li> <li><b>Scarcity:</b> Distinctive, though somewhat similar to other areas in region</li> </ul>
6. Cockscomb (Utah) 	<ul style="list-style-type: none"> <li><b>Form:</b> High, steeply tilted rock formations and roadway cut-slopes</li> <li><b>Line:</b> Vertical, angular, undulating, jagged</li> <li><b>Color:</b> Brown/beige, orange, red and grayish white</li> <li><b>Texture:</b> Coarse texture; jagged boulders and steeply uplifted sedimentary rock layers</li> <li><b>Distinct Natural Features Visible:</b> Cockscomb Formation</li> </ul>	<ul style="list-style-type: none"> <li><b>Representative Species:</b> Sage, snakeweed, blackbrush, Mormon tea and grasses; pinyon and juniper</li> <li><b>Height:</b> Low to medium</li> <li><b>Texture/Pattern:</b> Coarse in foreground; coarse to medium in background; mottled to stippled and scattered</li> <li><b>Colors:</b> Greens and blue-grays; seasonal colors</li> </ul>	<ul style="list-style-type: none"> <li><b>Enclosure:</b> High to moderately high</li> <li><b>Views:</b> Primarily limited to foreground</li> <li><b>Land Use:</b> Mostly undeveloped</li> <li><b>Ownership:</b> Federal (BLM, GSENM)</li> <li><b>Distinct Cultural Modifications:</b> Roadway and associated rock cut-faces</li> <li><b>Adjacent Scenery:</b> Greatly enhances overall visual quality</li> <li><b>Scarcity:</b> Distinctive in the region</li> </ul>
7. Fivemile Valley (Utah) 	<ul style="list-style-type: none"> <li><b>Form:</b> Large, rounded mountain to west; jagged, uplifted Cockscomb Formation to east; stair-stepped cliffs of Grand Staircase-Escalante National Monument in distance to north</li> <li><b>Line:</b> Horizontal, flowing in valley; rounded, vertical, angled, jagged in mountain/Cockscomb forms</li> <li><b>Color:</b> Brown/beige, yellow, orange, and deep vermilion red</li> <li><b>Texture:</b> Medium to coarse</li> <li><b>Distinct Natural Features Visible:</b> Cockscomb Formation (in foreground, to the east), Fivemile Valley, Fivemile Mountain and Sand Gulch</li> </ul>	<ul style="list-style-type: none"> <li><b>Representative Species:</b> Sage, Mormon tea, snakeweed, saltbush and grasses; pinyon and juniper</li> <li><b>Height:</b> Low to medium</li> <li><b>Texture/Pattern:</b> Generally medium to fine in foreground and in dominant stands of sage and grass; coarse in areas of dark-green pinyon and juniper; random, stippled</li> <li><b>Colors:</b> Greens and blue-grays; seasonal colors</li> </ul>	<ul style="list-style-type: none"> <li><b>Enclosure:</b> Moderately high</li> <li><b>Views:</b> Primarily limited to foreground to east and west; open up to background</li> <li><b>Land Use:</b> Relatively undeveloped; Paria Substation</li> <li><b>Ownership:</b> Mixture of private and federal (BLM, GSENM)</li> <li><b>Distinct Cultural Modifications:</b> Utility poles, towers, lines and fences; guardrails; information/direction signs; interpretive site on House Rock Valley Road</li> <li><b>Adjacent Scenery:</b> Greatly enhances overall visual quality</li> <li><b>Scarcity:</b> Interesting, but fairly common in the region</li> </ul>
8. Telegraph Flat (Utah) 	<ul style="list-style-type: none"> <li><b>Form:</b> Gently rolling plains; Vermilion Cliffs in middleground, 3 to 4 miles from alignment</li> <li><b>Line:</b> Horizontal, flowing; vertical and angled in cliffs</li> <li><b>Color:</b> Brown/beige, grayish white, orange, and deep vermilion red</li> <li><b>Texture:</b> Primarily fine; medium to coarse cliff faces to north</li> <li><b>Distinct Natural Features Visible:</b> Vermilion Cliffs, Fivemile Mountain, Kitchen Corral Wash, Petrified Hollow Wash, Telegraph Flat and Telegraph Wash</li> </ul>	<ul style="list-style-type: none"> <li><b>Representative Species:</b> Sage, saltbush, snakeweed, rabbitbrush, wild buckwheat and grasses; pinyon and juniper</li> <li><b>Height:</b> Low to medium</li> <li><b>Texture/Pattern:</b> Medium to fine in foreground and in dominant stands of sage and grass; coarse in areas of dark-green pinyon and juniper; dense, even to patchy shrub/grass cover; scattered to stippled pinyon and juniper, which become denser near highlands</li> <li><b>Colors:</b> Greens and blue-grays; seasonal colors</li> </ul>	<ul style="list-style-type: none"> <li><b>Enclosure:</b> Weak</li> <li><b>Views:</b> Open, panoramic in all directions</li> <li><b>Land Use:</b> Mostly undeveloped</li> <li><b>Ownership:</b> Nearly all federal (BLM, GSENM); small portion of private</li> <li><b>Distinct Cultural Modifications:</b> Buckskin Substation; utility poles, towers, lines and fences; information/direction signs</li> <li><b>Adjacent Scenery:</b> Greatly enhances overall visual quality</li> <li><b>Scarcity:</b> Interesting, but fairly common in the region</li> </ul>

**Table 5-132**  
**Visual Assessment Unit Descriptions**

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Visual Assessment Unit	Landform/Topography/Water	Vegetation	Other Features
9. Kanab/Vermilion Cliffs (Utah)	 <ul style="list-style-type: none"> <li><b>Form:</b> Flat to rolling; Vermilion Cliffs immediately to north; Whitesage Wash and tops of the Shinarump Cliffs visible south</li> <li><b>Line:</b> Horizontal, flowing; vertical and angled in cliffs with horizontal striations</li> <li><b>Color:</b> Brown/beige, grayish white, orange, and deep vermilion red</li> <li><b>Texture:</b> Fine soils, coarsely textured and striated cliff faces</li> <li><b>Distinct Natural Features Visible:</b> Vermilion Cliffs, Shinarump Cliffs, Whitesage Wash, Crescent Butte, Thompson Point, Hells Bellows Wash and Seaman Wash</li> </ul>	<ul style="list-style-type: none"> <li><b>Representative Species:</b> Sage, snakeweed, saltbush and grasses; pinyon and juniper; tamarisk in washes; urban plantings</li> <li><b>Height:</b> Low to medium</li> <li><b>Texture/Pattern:</b> Medium to fine in foreground and in dominant stands of sage and grass; coarse in areas of dark-green pinyon and juniper; dense, even to patchy shrub/grass cover; scattered to stippled pinyon and juniper, which become denser near highlands</li> <li><b>Colors:</b> Greens and blue-grays; seasonal colors</li> </ul>	<ul style="list-style-type: none"> <li><b>Enclosure:</b> Moderate, as Vermilion Cliffs shift within 0.5 to 1.0 mile of alignment</li> <li><b>Views:</b> Limited to middleground to north; panoramic views to the south</li> <li><b>Land Use:</b> Rural fringe of Kanab</li> <li><b>Ownership:</b> Primarily private; also federal (BLM, GSENM)</li> <li><b>Distinct Cultural Modifications:</b> Rural homes and businesses; ranches and farmland; water tanks, substation, and utility poles and lines; information/direction signs</li> <li><b>Adjacent Scenery:</b> Greatly enhances overall visual quality</li> <li><b>Scarcity:</b> Interesting, but fairly common in the region</li> </ul>
10. Whitesage Wash (Arizona / Utah)	 <ul style="list-style-type: none"> <li><b>Form:</b> Wide valley bottom; flat to slightly rolling terrain; steep cliff faces to north; Buckskin Mountain to south in background</li> <li><b>Line:</b> Horizontal, flowing; vertical and angled in surrounding landforms</li> <li><b>Color:</b> Brown/beige, yellow, grayish white, orange and red</li> <li><b>Texture:</b> Mostly fine; coarse, blocky cliff faces to north</li> <li><b>Distinct Natural Features Visible:</b> Whitesage Wash, Johnson Wash, Shinarump Cliffs, Buckskin Mountain and Muggins Flat</li> </ul>	<ul style="list-style-type: none"> <li><b>Representative Species:</b> Sage, saltbush, snakeweed, Russian thistle and high occurrence of grasses; pinyon and juniper</li> <li><b>Height:</b> Low to medium</li> <li><b>Texture/Pattern:</b> Medium to fine in foreground and in dominant stands of sage and grass; coarse in areas of dark-green pinyon and juniper; dense, even to patchy shrub/grass cover; scattered to stippled pinyon and juniper, which become denser near highlands</li> <li><b>Colors:</b> Greens and blue-grays; seasonal colors such as buff-colored grasses</li> </ul>	<ul style="list-style-type: none"> <li><b>Enclosure:</b> Weak to moderate</li> <li><b>Views:</b> Panoramic; cliffs to north and mountain to south</li> <li><b>Land Use:</b> Primarily undeveloped grazing land with transmission line corridor</li> <li><b>Ownership:</b> Primarily federal (BLM); also private and state</li> <li><b>Distinct Cultural Modifications:</b> Transmission lines and towers, off-highway vehicle (OHV) roads, fences, tanks and other grazing-related features</li> <li><b>Adjacent Scenery:</b> Enhances overall visual quality</li> <li><b>Scarcity:</b> Common in the region</li> </ul>
11. Kanab/Fredonia/Lost Springs Wash (Arizona / Utah)	 <ul style="list-style-type: none"> <li><b>Form:</b> Flat prairie setting on east end; drops between Shinarump Cliffs through sloped valley before entering wide valley bottom</li> <li><b>Line:</b> Horizontal, flowing; vertical and undulating in cliffs</li> <li><b>Color:</b> Brown/beige, yellow, grayish white, orange and red</li> <li><b>Texture:</b> Mostly fine; coarse, blocky cliff faces</li> <li><b>Distinct Natural Features Visible:</b> Shinarump Cliffs, Lost Spring Wash and Kanab Creek</li> </ul>	<ul style="list-style-type: none"> <li><b>Representative Species:</b> Sage, snakeweed, saltbush, grasses; pinyon and juniper</li> <li><b>Height:</b> Low to medium</li> <li><b>Texture/Pattern:</b> Medium to fine in foreground and in dominant stands of sage and grass; coarse in areas of dark-green pinyon and juniper; dense, even to patchy shrub/grass cover; scattered to stippled pinyon and juniper, which become denser near highlands</li> <li><b>Colors:</b> Greens and blue-grays; seasonal colors</li> </ul>	<ul style="list-style-type: none"> <li><b>Enclosure:</b> Weak to strong; weak to none in flat plains; moderately high between Shinarump Cliffs; weak to moderate in valley bottom</li> <li><b>Views:</b> Panoramic in open areas; limited in valleys</li> <li><b>Land Use:</b> Rural fringe of Kanab and rural/urban fringe of Fredonia; residential; ranching, business, industrial/support facilities; farming</li> <li><b>Ownership:</b> Primarily private and state; small amount of federal (BLM)</li> <li><b>Distinct Cultural Modifications:</b> Water tanks, radio/cell towers, utility poles, streetlights, fences, substation, and information/direction signs</li> <li><b>Adjacent Scenery:</b> Enhances overall visual quality</li> <li><b>Scarcity:</b> Interesting, but fairly common in the region</li> </ul>
12. Jacob Canyon/Kanab Creek/Pipe Valley (Arizona)	 <ul style="list-style-type: none"> <li><b>Form:</b> Flat to gently rolling prairies; occasional deeply cut washes</li> <li><b>Line:</b> Horizontal, flowing; vertical and angled in washes</li> <li><b>Color:</b> Brown/beige, grayish white, orange and red</li> <li><b>Texture:</b> Fine flat prairie areas; coarse and rugged washes</li> <li><b>Distinct Natural Features Visible:</b> Jacob Canyon, Pipe Valley, Pipe Valley Wash, Moonshine Ridge and Big Sand Wash</li> </ul>	<ul style="list-style-type: none"> <li><b>Representative Species:</b> Sage, snakeweed, Mormon tea and high occurrence of grasses; juniper and pinyon; tamarisk and poplar in washes</li> <li><b>Height:</b> Low to medium</li> <li><b>Texture/Pattern:</b> Medium in foreground; fine in middleground; coarse in areas of dark-green pinyon and juniper; even and moderately dense, with some areas of scattered to clumped juniper and pinyon</li> <li><b>Colors:</b> Greens and blue-grays; seasonal colors such as buff-colored grasses</li> </ul>	<ul style="list-style-type: none"> <li><b>Enclosure:</b> Weak to none in prairies, high in washes</li> <li><b>Views:</b> Panoramic and expansive in prairies; limited mostly to foreground in wash areas</li> <li><b>Land Use:</b> Generally undeveloped; grazing; occasional recreation</li> <li><b>Ownership:</b> Primarily federal (BLM); also private, tribal and state</li> <li><b>Distinct Cultural Modifications:</b> OHV roads, utility towers and lines and occasional grazing-related features</li> <li><b>Adjacent Scenery:</b> Enhances overall visual quality</li> <li><b>Scarcity:</b> Interesting, but fairly common in the region</li> </ul>

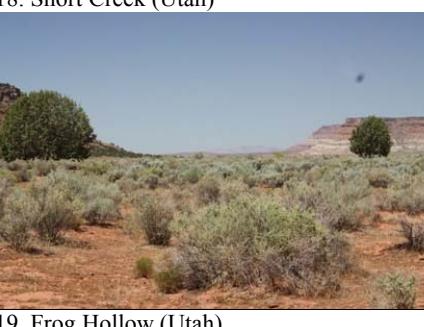
**Table 5-132**  
**Visual Assessment Unit Descriptions**

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Visual Assessment Unit	Landform/Topography/Water	Vegetation	Other Features
13. Shinarump Cliffs (Arizona)	<ul style="list-style-type: none"> <li>• <b>Form:</b> Flat to rolling terrain; steep cliff faces to north</li> <li>• <b>Line:</b> Horizontal, flowing, vertical, angled; striated in cliffs</li> <li>• <b>Color:</b> Brown/beige, grayish white, orange, and Vermilion red</li> <li>• <b>Texture:</b> Fine to medium; coarse, striated cliff faces</li> <li>• <b>Distinct Natural Features Visible:</b> Shinarump Cliffs, Riggs Flat, Sandy Canyon Wash, Sand Wash and Twomile Wash</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Representative Species:</b> Sage, Mormon tea, saltbush, greasewood and grasses; pinyon and juniper</li> <li>• <b>Height:</b> Low to medium</li> <li>• <b>Texture/Pattern:</b> Medium to fine in foreground and in dominant stands of sage and grass; coarse in areas of dark-green pinyon and juniper; dense, patchy to stippled shrub/grass cover; scattered pinyon and juniper become denser near highlands</li> <li>• <b>Colors:</b> Greens and blue-grays; seasonal colors</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Enclosure:</b> Moderately high, steep cliffs to north approximately 1.0 to 1.5 miles from the road, creating moderate degree of enclosure</li> <li>• <b>Views:</b> Generally limited to foreground and middleground by adjacent cliffs to north; expansive and panoramic views in other directions</li> <li>• <b>Land Use:</b> Mostly undeveloped</li> <li>• <b>Ownership:</b> State and private</li> <li>• <b>Distinct Cultural Modifications:</b> Utility poles, signs, fences and distant electrical towers/pylons</li> <li>• <b>Adjacent Scenery:</b> Greatly enhances overall visual quality</li> <li>• <b>Scarcity:</b> Interesting, but fairly common in the region</li> </ul>
14. Potter Canyon (Arizona)	<ul style="list-style-type: none"> <li>• <b>Form:</b> Flat to rolling terrain; steep cliff faces to north</li> <li>• <b>Line:</b> Horizontal, flowing; vertical and angled in cliffs</li> <li>• <b>Color:</b> Brown/beige, grayish white, orange, and deep vermilion red</li> <li>• <b>Texture:</b> Fine to medium; coarse, striated cliff faces</li> <li>• <b>Distinct Natural Features Visible:</b> Vermilion Cliffs, Potter Canyon, Pipe Valley and Cedar Ridge</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Representative Species:</b> Sage, Mormon tea, saltbush, greasewood and grasses; pinyon and juniper</li> <li>• <b>Height:</b> Low to medium</li> <li>• <b>Texture/Pattern:</b> Medium to fine in foreground and in dominant stands of sage and grass; coarse in areas of dark-green pinyon and juniper; dense, patchy to stippled shrub/grass cover; scattered pinyon and juniper become denser near highlands</li> <li>• <b>Colors:</b> Greens and blue-grays; seasonal colors</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Enclosure:</b> High, steep cliffs to north approximately 0.5 to 1.0 mile from the road, creating moderate degree of enclosure</li> <li>• <b>Views:</b> Generally limited to foreground and middleground by adjacent cliffs to north; expansive and panoramic views in other directions</li> <li>• <b>Land Use:</b> Mostly undeveloped</li> <li>• <b>Ownership:</b> State and private</li> <li>• <b>Distinct Cultural Modifications:</b> Utility poles, signs, fences and distant electrical towers/pylons</li> <li>• <b>Adjacent Scenery:</b> Greatly enhances overall visual quality</li> <li>• <b>Scarcity:</b> Interesting, but fairly common in the region</li> </ul>
15. Cottonwood Wash (Arizona)	<ul style="list-style-type: none"> <li>• <b>Form:</b> Climbs up Cedar Ridge onto flat, gently rolling plains; large cliff faces to north and east</li> <li>• <b>Line:</b> Horizontal; vertical and angled in cliffs</li> <li>• <b>Color:</b> Brown/beige, grayish white, orange, and deep vermilion red</li> <li>• <b>Texture:</b> Generally fine; coarse, blocky, striated cliff faces</li> <li>• <b>Distinct Natural Features Visible:</b> Vermilion Cliffs, Cottonwood Wash and Cedar Ridge</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Representative Species:</b> Sage, snakeweed, saltbush, rabbitbrush and high occurrence of grasses; pinyon and juniper</li> <li>• <b>Height:</b> Low to medium</li> <li>• <b>Texture/Pattern:</b> Medium to fine in foreground and in dominant stands of sage and grass; coarse in areas of dark-green pinyon and juniper; dense, patchy to stippled shrub/grass cover; scattered pinyon and juniper become denser near highlands</li> <li>• <b>Colors:</b> Greens and blue-grays; seasonal colors such as buff-colored grasses</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Enclosure:</b> Moderate to weak; Vermilion Cliffs 2 to 5 miles from alignment</li> <li>• <b>Views:</b> Limited to middleground by cliffs to north and east; open and panoramic in other directions</li> <li>• <b>Land Use:</b> Mostly undeveloped and rural; some agricultural</li> <li>• <b>Ownership:</b> Private, state and federal (BLM)</li> <li>• <b>Distinct Cultural Modifications:</b> Rural homes and businesses, utility poles, fences, signs and water tank</li> <li>• <b>Adjacent Scenery:</b> Greatly enhances overall visual quality</li> <li>• <b>Scarcity:</b> Interesting, but fairly common in the region</li> </ul>
16. Colorado City/Hildale (Arizona)	<ul style="list-style-type: none"> <li>• <b>Form:</b> Flat to rolling terrain; high cliff faces to east</li> <li>• <b>Line:</b> Horizontal, flowing; vertical and angled/undulating in cliffs</li> <li>• <b>Color:</b> Brown/beige, grayish white, orange, and deep vermilion red</li> <li>• <b>Texture:</b> Generally fine; coarse, blocky, striated cliff faces</li> <li>• <b>Distinct Natural Features Visible:</b> Vermilion Cliffs, Cottonwood Point and Short Creek</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Representative Species:</b> Sage, snakeweed and grasses; pinyon and juniper; tamarisk and poplar in washes; urban plantings</li> <li>• <b>Height:</b> Low to medium</li> <li>• <b>Texture/Pattern:</b> Medium to fine in foreground and in dominant stands of sage and grass; coarse in areas of dark-green pinyon and juniper; dense, patchy to stippled shrub/grass cover; scattered pinyon and juniper become denser near surrounding highlands</li> <li>• <b>Colors:</b> Greens and blue-grays; seasonal colors</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Enclosure:</b> Moderate; Vermilion Cliffs within 1.0 mile of the alignment</li> <li>• <b>Views:</b> Limited to middleground by cliffs to north and east; open and panoramic in other directions</li> <li>• <b>Land Use:</b> Residential; commercial; light industrial</li> <li>• <b>Ownership:</b> Mostly private, within Colorado City, Arizona, city limits</li> <li>• <b>Distinct Cultural Modifications:</b> Buildings, substation, water tanks, utility poles and lines, septic lagoons, streetlights and parking-lot lights, signs, billboards, fences and guardrails</li> <li>• <b>Adjacent Scenery:</b> Greatly enhances overall visual quality</li> <li>• <b>Scarcity:</b> Interesting, but fairly common in the region</li> </ul>

**Table 5-132**  
**Visual Assessment Unit Descriptions**

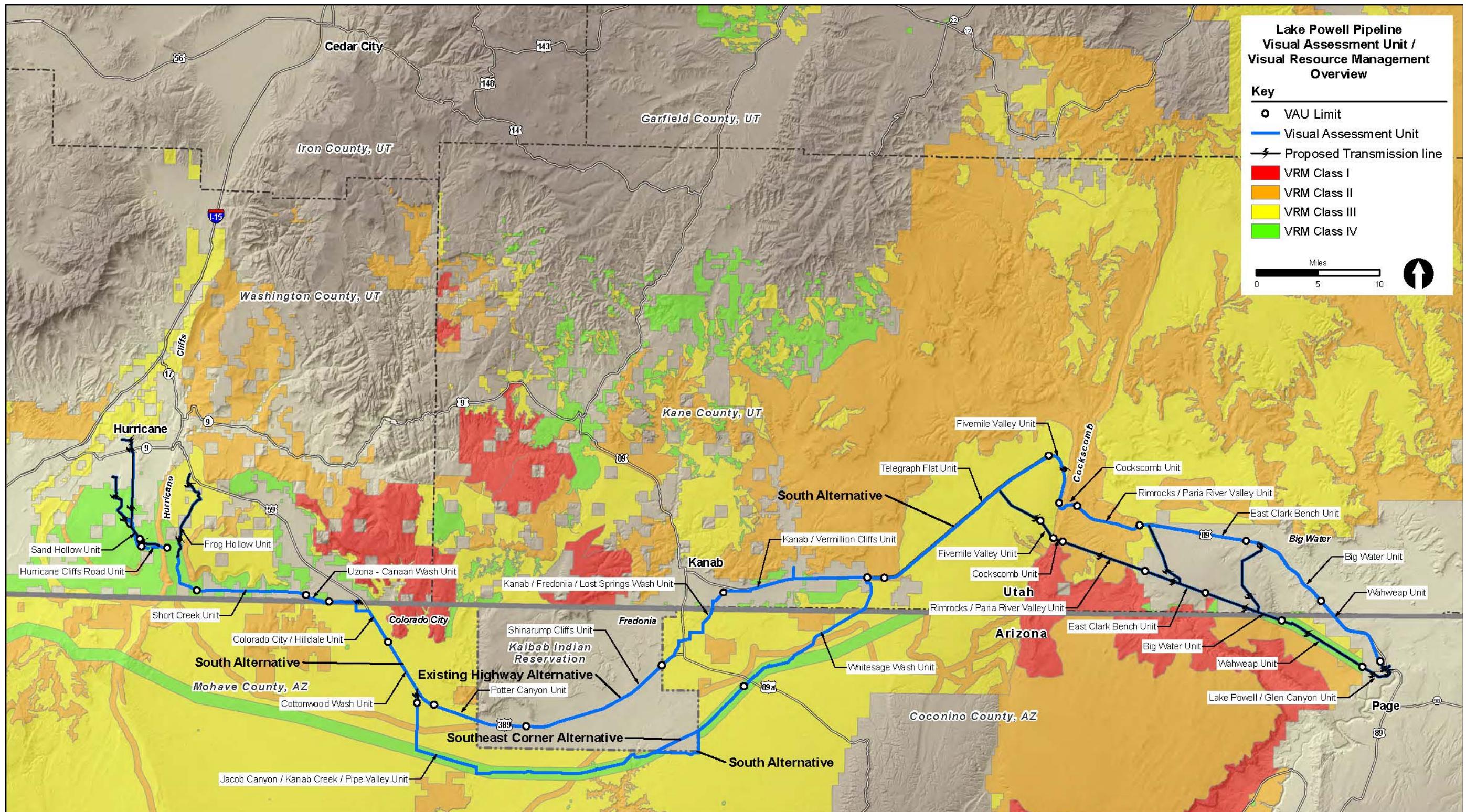
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Visual Assessment Unit	Landform/Topography/Water	Vegetation	Other Features
17. Uzona-Canaan Wash (Arizona /Utah) 	<ul style="list-style-type: none"> <li>• <b>Form:</b> Small wash through varying hills, rock outcroppings, and mesas with blocky cliff faces</li> <li>• <b>Line:</b> Horizontal, angular wash; undulating and broken rock forms.</li> <li>• <b>Color:</b> Brown/beige, grayish white and orange</li> <li>• <b>Texture:</b> Coarse; rock outcroppings and cliff faces</li> <li>• <b>Distinct Natural Features Visible:</b> Uzona-Canaan Wash, which opens up to Short Creek and Caanan Gap to the west</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Representative Species:</b> Pinyon and juniper, with sage, snakeweed, saltbush and grasses; pinyon and juniper dominant on east end; sage and grasses dominant on west end</li> <li>• <b>Height:</b> Low to medium</li> <li>• <b>Texture/Pattern:</b> Medium to coarse; irregular, stippled shrub/grass cover with scattered to clumped pinyon and juniper</li> <li>• <b>Colors:</b> Greens and blue-grays; seasonal colors</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Enclosure:</b> High; surrounding cliff faces and hills</li> <li>• <b>Views:</b> Limited to foreground by vegetation and terrain; open up to west on west end of the unit</li> <li>• <b>Land Use:</b> Mostly undeveloped; recreational</li> <li>• <b>Ownership:</b> Federal (BLM), private and state</li> <li>• <b>Distinct Cultural Modifications:</b> Hiking and OHV trails; other ground disturbance</li> <li>• <b>Adjacent Scenery:</b> Greatly enhances overall visual quality</li> <li>• <b>Scarcity:</b> Common in the region</li> </ul>
18. Short Creek (Utah) 	<ul style="list-style-type: none"> <li>• <b>Form:</b> Wide, flat valley; high, steep cliff faces to north and south</li> <li>• <b>Line:</b> Horizontal valley bottom and cliff striations, angled talus slopes.</li> <li>• <b>Color:</b> Brown/beige, grayish white, orange and red</li> <li>• <b>Texture:</b> Generally fine; coarse, blocky, striated cliff faces</li> <li>• <b>Distinct Natural Features Visible:</b> Little Creek Mountain, Lost Spring Mountain, Canaan Gap, Short Creek, Hurricane Cliffs and The Divide (landform)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Representative Species:</b> Sage, rabbitbrush, saltbush, Russian thistle and grasses; pinyon and juniper</li> <li>• <b>Height:</b> Low to medium</li> <li>• <b>Texture/Pattern:</b> Medium to fine in foreground and in dominant stands of sage and grass; coarse in areas of dark-green pinyon and juniper; dense, patchy to stippled shrub/grass cover; scattered pinyon and juniper become denser near highlands</li> <li>• <b>Colors:</b> Greens and blue-grays; seasonal colors</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Enclosure:</b> High on east end and moderate to low on west; surrounding cliffs of Little Creek Mountain and Lost Spring Mountain</li> <li>• <b>Views:</b> Limited to foreground and middleground on east end; expansive and panoramic on west end</li> <li>• <b>Land Use:</b> Farming; ranching</li> <li>• <b>Ownership:</b> Federal (BLM), state and private</li> <li>• <b>Distinct Cultural Modifications:</b> Scattered ranches and associated facilities; assortment of unpaved roads striping the valley</li> <li>• <b>Adjacent Scenery:</b> Greatly enhances overall visual quality</li> <li>• <b>Scarcity:</b> Interesting, but fairly common in the region</li> </ul>
19. Frog Hollow (Utah) 	<ul style="list-style-type: none"> <li>• <b>Form:</b> Various landforms, including volcanic cones, basalt flows, washes and small cliff faces; large mountains and mesas/cliffs to north and west</li> <li>• <b>Line:</b> Horizontal, vertical, angled, undulating</li> <li>• <b>Color:</b> Brown/beige, grayish white, orange, red and black</li> <li>• <b>Texture:</b> Medium to coarse</li> <li>• <b>Distinct Natural Features Visible:</b> Little Creek Mountain, Hurricane Cliffs, Mollies Nipple, Gould Wash, Gooseberry Mesa and Pinetop Mountains</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Representative Species:</b> Sage, rabbitbrush, saltbush, Mormon tea, barberry, snakeweed, blackbrush and grasses; pinyon and juniper</li> <li>• <b>Height:</b> Low to medium</li> <li>• <b>Texture/Pattern:</b> Medium to fine in foreground and in dominant stands of sage and grass; coarse in areas of dark-green pinyon and juniper; dense, even shrub/grass cover; scattered pinyon and juniper</li> <li>• <b>Colors:</b> Greens and blue-grays; seasonal colors</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Enclosure:</b> Varies; high to moderately low</li> <li>• <b>Views:</b> Varies; limited to expansive and panoramic</li> <li>• <b>Land Use:</b> Mostly undeveloped and recreational</li> <li>• <b>Ownership:</b> Private, state and federal (BLM)</li> <li>• <b>Distinct Cultural Modifications:</b> Ranch/educational facility (Diamond Ranch Academy); water catchment facility; several OHV roads</li> <li>• <b>Adjacent Scenery:</b> Greatly enhances overall visual quality</li> <li>• <b>Scarcity:</b> Distinctive, though somewhat similar to other areas in region</li> </ul>
20. Hurricane Cliffs Road (Utah) 	<ul style="list-style-type: none"> <li>• <b>Form:</b> Sloped valley with high cliffs to east and a large rolling hill to west</li> <li>• <b>Line:</b> Horizontal, concave, angled, vertical, undulating; horizontal striations in cliffs</li> <li>• <b>Color:</b> Brown/beige, gray, orange, black</li> <li>• <b>Texture:</b> Generally fine; coarse, striated, blocky, rugged cliffs</li> <li>• <b>Distinct Natural Features Visible:</b> Hurricane Cliffs</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Representative Species:</b> Creosotebush, Mormon tea, snakeweed, yucca, rabbitbrush and grasses</li> <li>• <b>Height:</b> Low</li> <li>• <b>Texture/Pattern:</b> Medium in foreground and fine in background; even to stippled and gradated; sparse</li> <li>• <b>Colors:</b> Green; seasonal colors</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Enclosure:</b> Moderate to high</li> <li>• <b>Views:</b> Limited to foreground by landforms to east and west; open and expansive to north and south</li> <li>• <b>Land Use:</b> Undeveloped; recreational</li> <li>• <b>Ownership:</b> Federal (BLM)</li> <li>• <b>Distinct Cultural Modifications:</b> OHV roads</li> <li>• <b>Adjacent Scenery:</b> Greatly enhances overall visual quality</li> <li>• <b>Scarcity:</b> Distinctive, though somewhat similar to other areas in region</li> </ul>

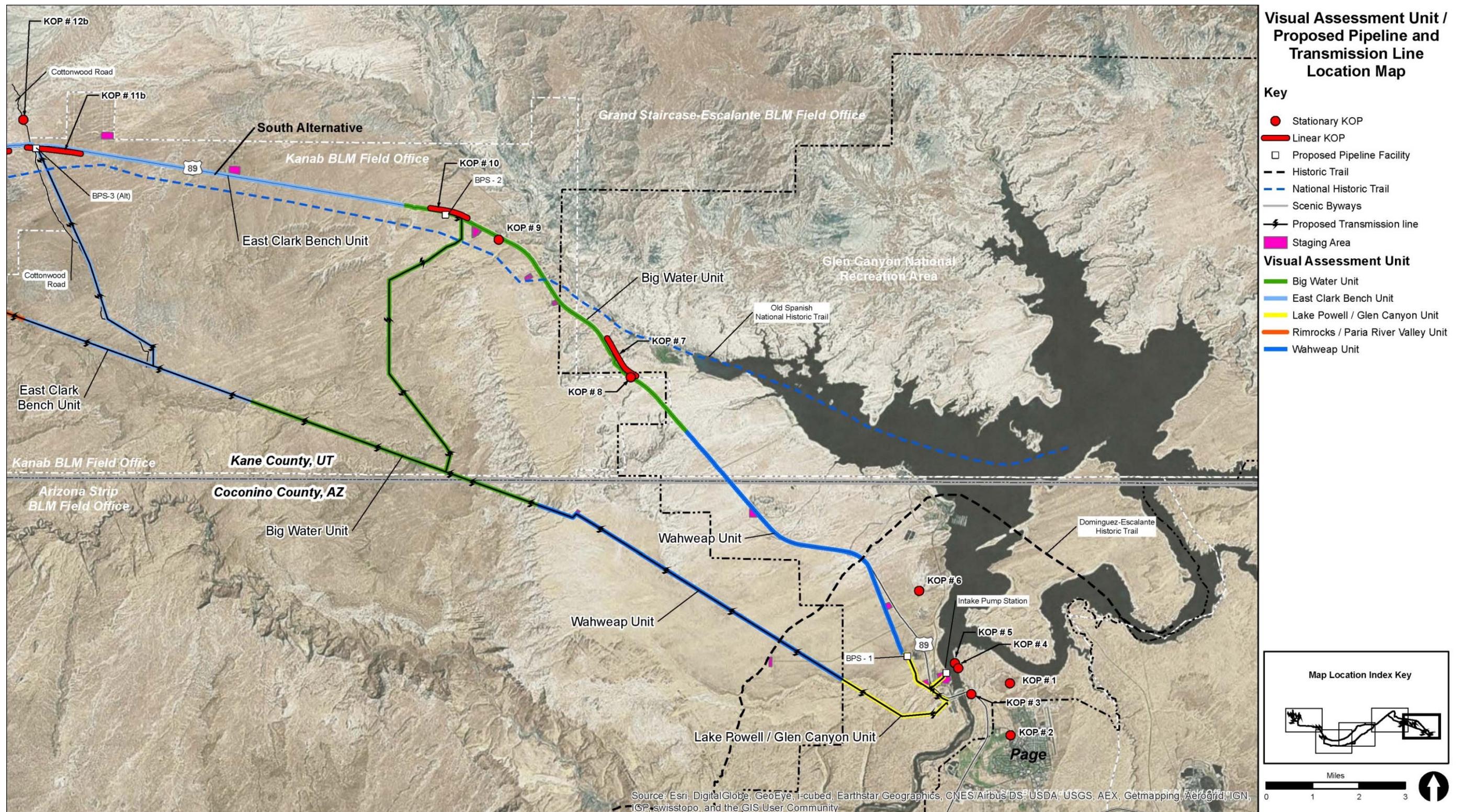
**Table 5–132**  
**Visual Assessment Unit Descriptions**

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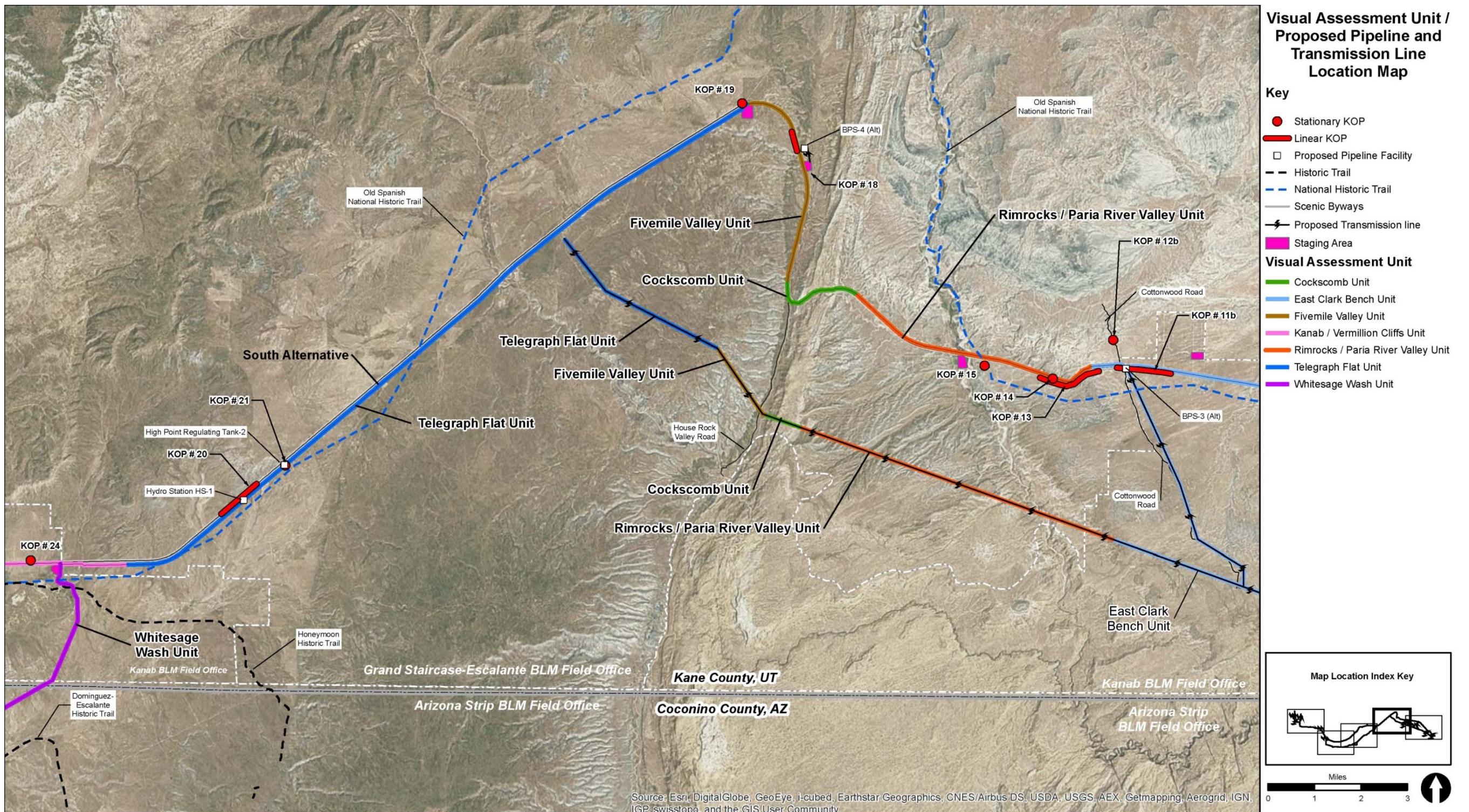
Visual Assessment Unit	Landform/Topography/Water	Vegetation	Other Features
21. Sand Hollow (Utah) 	<ul style="list-style-type: none"> <li>• <b>Form:</b> Flat to rolling terrain with mesas, rock formations, sand dunes; unit include large reservoir</li> <li>• <b>Line:</b> Horizontal, sloped, rounded; meandering in water's edge</li> <li>• <b>Color:</b> Brownish-orange, coral pink and black</li> <li>• <b>Texture:</b> Very fine, sandy soils; areas of medium- to coarse-textured rock formations</li> <li>• <b>Distinct Natural Features Visible:</b> Sand Mountain, Hurricane Cliffs and Pine Valley Mountains</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Representative Species:</b> Sage, rabbitbrush and snakeweed; scattered to clustered creosotebush</li> <li>• Height: Low</li> <li>• <b>Texture/Pattern:</b> Medium in foreground; fine in background; even and stippled</li> <li>• <b>Colors:</b> Greens and grays; seasonal colors</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Enclosure:</b> Weak to moderate</li> <li>• <b>Views:</b> Open; panoramic</li> <li>• <b>Land Use:</b> Residential; recreational</li> <li>• <b>Ownership:</b> Private, federal (BLM) and state (Sand Hollow State Park)</li> <li>• <b>Distinct Cultural Modifications:</b> Residential homes; park headquarter building; picnic shelters; restroom facilities; utility houses; boat launch; dams; Sand Hollow Reservoir; water tanks; parking lots and lighting; paved and OHV roads; fences; information/direction signs</li> <li>• <b>Adjacent Scenery:</b> Greatly enhances overall visual quality</li> <li>• <b>Scarcity:</b> Distinctive in the region</li> </ul>



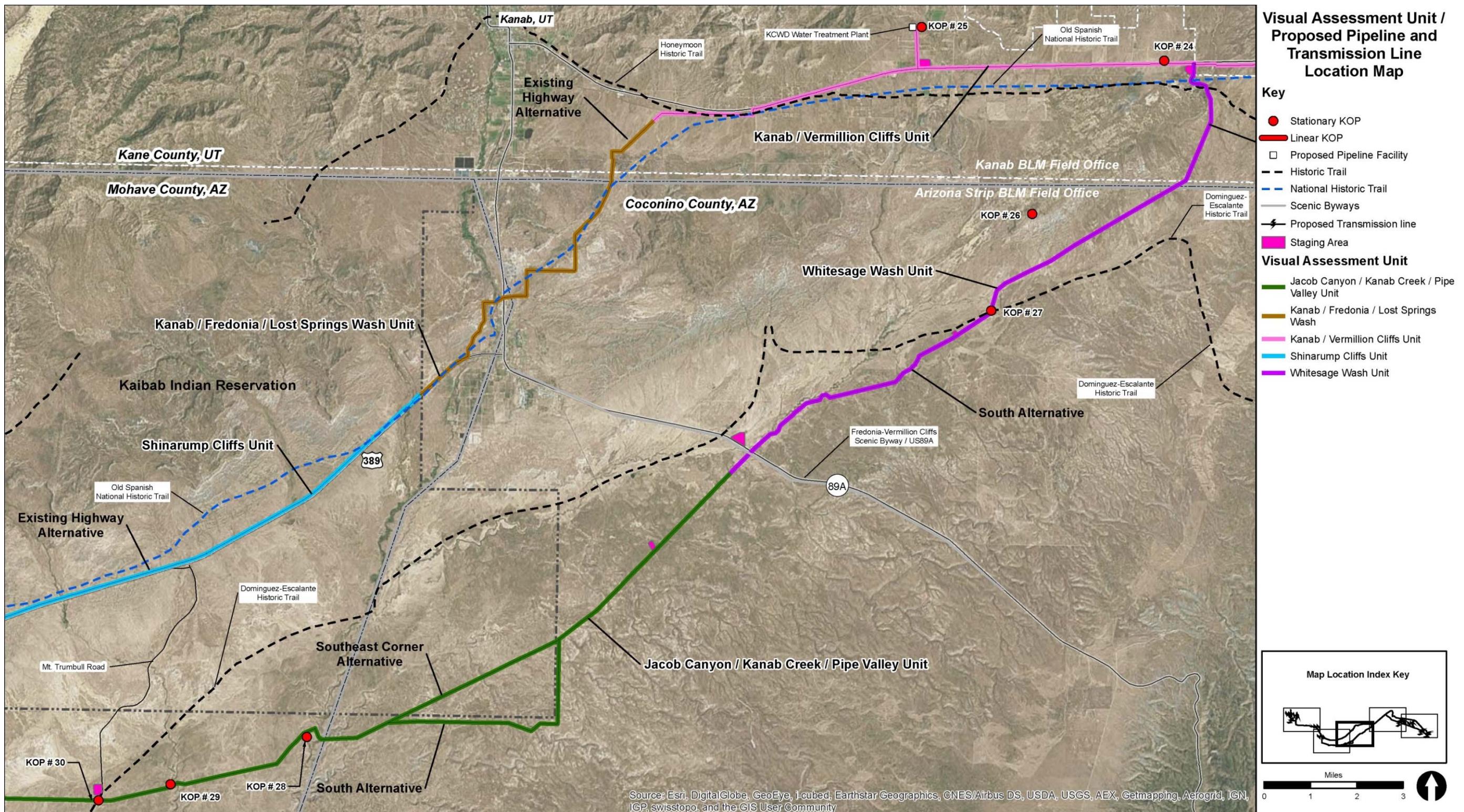
**Figure 5-190**  
Visual Assessment Unit/BLM Visual Resource Management Classes



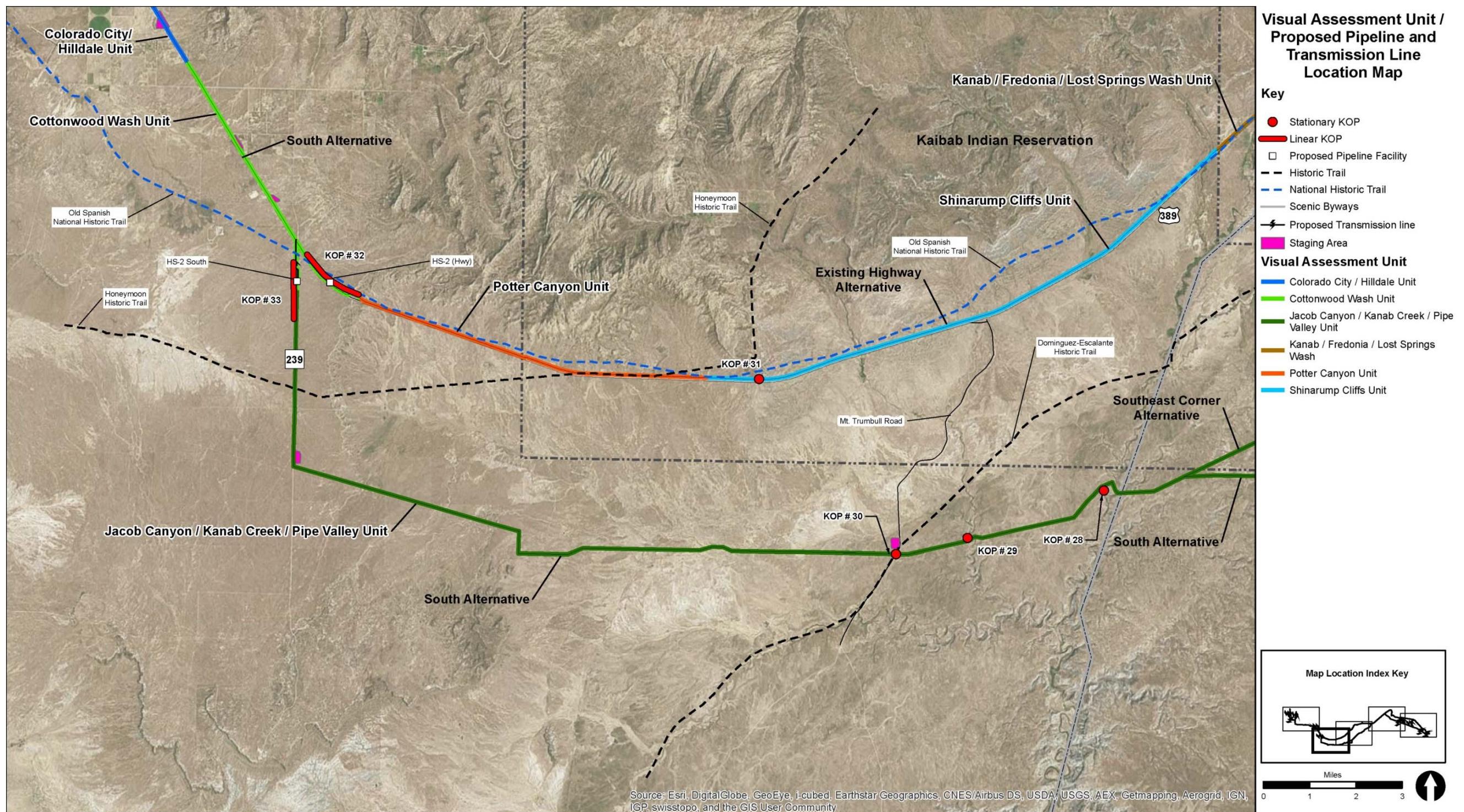
**Figure 5-191**  
**Visual Assessment Unit – Proposed Pipeline and Transmission Line**



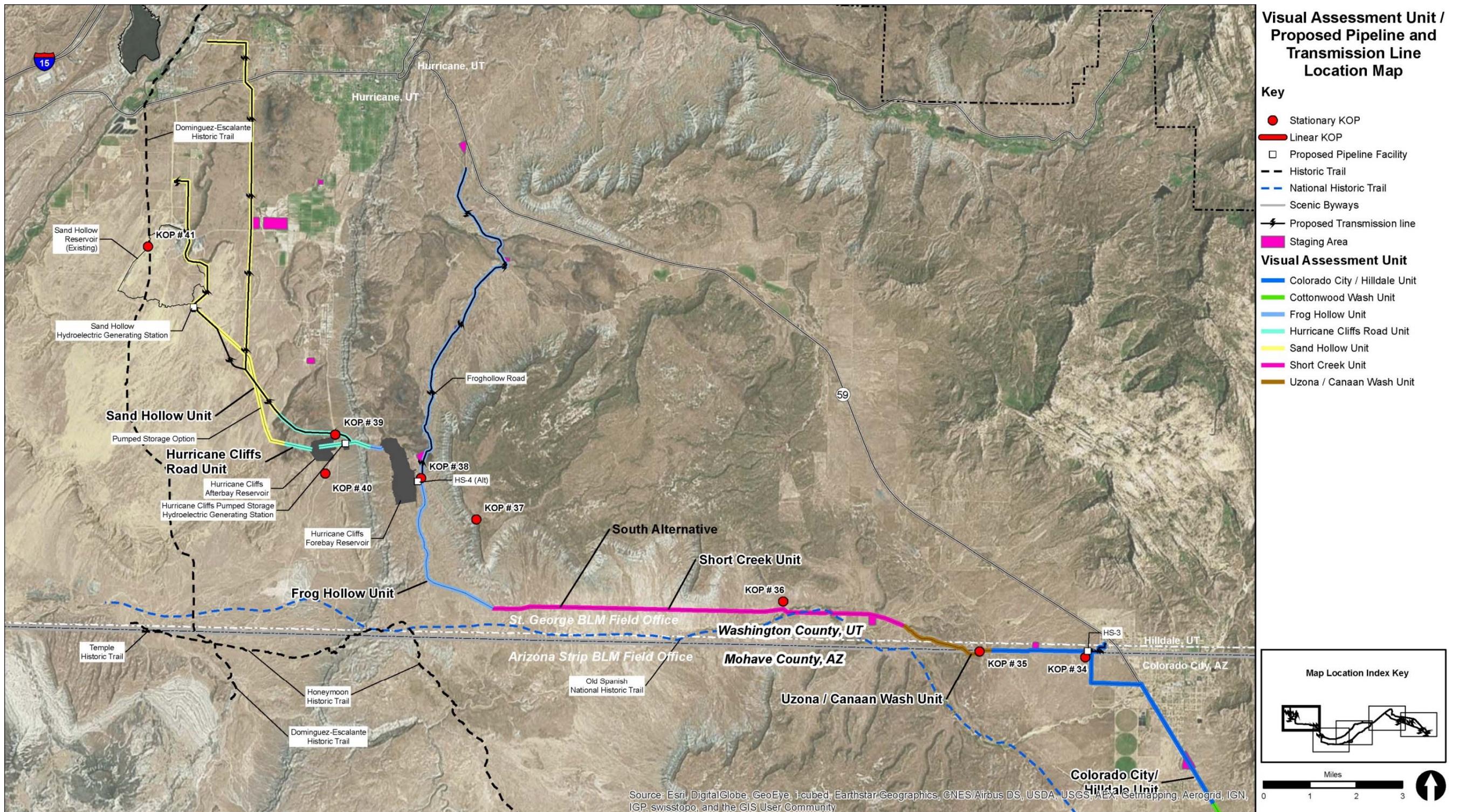
**Figure 5-192**  
Visual Assessment Unit – Proposed Pipeline and Transmission Line



**Figure 5-193**  
Visual Assessment Unit – Proposed Pipeline and Transmission Line



**Figure 5-194**  
**Visual Assessment Unit – Proposed Pipeline and Transmission Line**



**Figure 5-195**  
Visual Assessment Unit – Proposed Pipeline and Transmission Line

### **5.3.16.1.3 BLM Visual Management Objectives.**

The potential effect on visual resources, as well as other resources, from any activities occurring on federally-managed land within the area of potential effect must be considered. Agencies such as the BLM have programs for evaluating the existing visual landscape and determining the ability of an activity or project to meet the goals of that program. The BLM's program, along with specific objectives for the area of potential effect, is described below.

BLM's responsibility for managing scenic resources on public land under its jurisdiction is emphasized by the agency's mission statement: "It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations." The BLM's ongoing policy is to provide basic stewardship responsibility to identify and protect visual resources on all BLM land and is described in the *BLM Manual Section 8400—Visual Resources Management*. The BLM's VRM System addresses the issue that different levels of scenic value require different levels of management and that assessing scenic values and determining visual effects is a subjective process. The VRM System also provides a framework for the following:

- Identifying and evaluating scenic values to determine the appropriate level of management
- Analyzing potential visual effects and the application of visual design techniques to ensure that surface disturbances blend effectively into their surroundings

In the VRM process, the resource management plans assign VRM classes to land within each field office's jurisdiction. Each management class has an objective statement that determines the approach for assessing the effects of activities on visual resources. The objectives, as described in the BLM VRM manual, are listed below. VRM classes for the project area are shown in Figure 5-190 and Table 5-133 shows the approximate percentage of each VRM class that would be crossed by the project.

#### **Class I**

The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes but does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.

#### **Class II**

The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color and texture found in the predominant natural features of the characteristic landscape.

#### **Class III**

The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the casual observer's view. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

## **Class IV**

The objective of this class is to provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention.

In addition to VRM class objectives, resource management plans also identify goals related to visual resources for management of all activities. Table 5-134 summarizes the current management goals of each BLM FO.

### **5.3.16.1.4 National Park Service.**

#### ***5.3.16.1.4.1 Glen Canyon National Recreation Area.***

The mission of the NPS at Glen Canyon National Recreation Area and the Rainbow Bridge National Monument is as follows:

“To provide for public outdoor recreation use and enjoyment of Glen Canyon National Recreation Area and Rainbow Bridge National Monument and preserve and protect the scenic, scientific, and historic features therein while providing a significant understanding to visitors of the scientific and cultural importance of objects, sites, populations, beliefs, and habitats of the past and future.”

The NPS does not have a specific management program for Glen Canyon National Recreation Area visual resources. For consistency in assessing potential effects on the visual landscape, the visual resource analysis methodology outlined in this report was also used to assess effects on NPS land.

#### ***5.3.16.1.4.2 Pipe Springs National Monument.***

Surrounded by Kaibab-Paiute Indian Reservation and located just north of Arizona Highway 389, PSNM is a historic Mormon settlement that is part of the National Park system. Designated as a national monument since 1923, Pipe Spring commemorates western pioneer settlement and American Indian-pioneer interactions on the frontier. Living history in the monument depicts how an early Mormon settlement looked and worked in the 1800s. The expansive view from the monument is an important part of its historic character, because it provides an appreciation of the settlement’s isolation and of the commanding position provided by its location.

The PSNM includes a visitor center, bookstore, museum, ranch building and grounds (including corrals, an orchard, a seasonal garden, and cabins), the Winsor Castle fort, and a one-half mile loop known as Ridge Trail. Scenic views of the Arizona Strip can be observed along the Ridge Trail. The NPS does not have a specific management program for PSNM visual resources. For consistency in assessing potential effects on the visual landscape, the visual resource analysis methodology outlined in this report was also used to assess effects on NPS land.

**Table 5-133**  
**VRM Classes Crossed by Project Components**

VRM Class <sup>1</sup>	Approximate distance in miles	Approximate percentage of total
<b>Proposed Action</b>		
II	12.9	12%
III	46.8	45%
IV	44.9	43%
<b>Existing Highway Alternative</b>		
II	10.4	15%
III	44.2	66%
IV	12.6	19%
<b>Southeast Corner Alternative</b>		
II	12.9	13%
III	42.9	43%
IV	43.7	44%
<b>Electric Transmission System associated with the Proposed Action</b>		
II	7.0	18%
III	11.8	31%
IV	19.6	51%
<b>Electric Transmission System associated with the Existing Highway Alternative</b>		
II	7.0	19%
III	10.9	29%
IV	19.6	52%
<b>Electric Transmission System associated with the Southeast Corner Alternative</b>		
II	7.0	18%
III	11.8	31%
IV	19.6	51%

<sup>1</sup>VRM Class I not crossed by project components.

In addition to VRM class objectives, resource management plans also identify goals related to visual resources for management of all activities.

Table 5-134 summarizes the goals of each BLM field office's current management goals.

**Table 5-134**  
**BLM Field Office and BLM National Monument Visual Resource Management Goals**

<b>Field Office</b>	<b>Goals</b>
Grand Staircase-Escalante National Monument	<ul style="list-style-type: none"> <li>• Preserve the spectacular scenic assets in “this high, rugged, remote region where bold plateaus and multi-hued cliffs run for distances that defy human perspective” (Proclamation 6920, 1996)</li> <li>• All proposed actions must consider the importance of the visual values and must minimize the effects the project may have on these values. All projects must be designed to be unobtrusive and follow these procedures: <ul style="list-style-type: none"> <li>• The visual resource contrast rating system will be used as a guide to analyze potential visual effects of all proposed actions.</li> <li>• Projects must be designed to mitigate effects and conform to the assigned VRM class.</li> <li>• Natural or natural appearing materials will be used as a priority</li> <li>• Restoration and revegetation objectives must be met.</li> </ul> </li> </ul>
Kanab Field Office	<ul style="list-style-type: none"> <li>• Manage public land for multiple uses of public resources within the framework of applicable laws, regulations and agency policies</li> <li>• Use adaptive management to meet resource objectives</li> <li>• Implement ecosystem management in an open, cooperative and responsive atmosphere to involve agencies, groups and individuals in monitoring and addressing resource issues on public land—issues that often span administrative and ownership boundaries</li> <li>• Maintain, improve and restore (where needed) healthy ecosystems and habitat to support viable populations of fish, plant and wildlife species while reducing habitat loss and fragmentation</li> <li>• Protect and enhance cultural and natural resources and values using the diversity of tools available to the BLM</li> <li>• Provide a variety of recreational, educational and interpretive opportunities for people to experience public land resources and values</li> <li>• Recognize the unique cultural, historical and social values of the decision area in developing a plan that manages the land and protects the heritage it engenders</li> <li>• Plan, modify and implement resource management activities in a manner that would minimize effects on visual resources</li> <li>• Manage the diversity of landscapes in the decision area for a desired level of change consistent with and giving consideration to other resource values and uses</li> </ul>
Arizona Strip Field Office	<ul style="list-style-type: none"> <li>• Manage public land in a manner that protects the quality of the scenic (visual) values of these lands.</li> <li>• Ensure aesthetically pleasing surroundings for all Americans</li> <li>• Maintain this region’s scenic beauty, open-space landscapes and other high-quality visual resources</li> <li>• Generally maintain existing “footprint” of cultural landscapes (facilities, projects and improvements)</li> <li>• Maintain dark night-sky conditions that are affected primarily by natural light sources</li> </ul>
St. George Field Office	<ul style="list-style-type: none"> <li>• Manage public land in such a way as to preserve scenic vistas that are deemed most important according to the following criteria: <ul style="list-style-type: none"> <li>• Impact on quality of life for residents and communities in the area</li> <li>• Contribution to the quality of recreational visitor experiences</li> <li>• Support for regional tourism industry and segments of the local economy dependent on public land resources</li> <li>• Complement rural, agricultural, historic, and urban landscapes on adjoining private, state and tribal land by maintaining the integrity of background vistas on public land</li> </ul> </li> </ul>
Source: BLM FO RMP	

### **5.3.16.1.5 State and Federal Designated Scenic Roads and Byways.**

Requirements for the designation of state and federal scenic roads and byways vary by state. In Arizona, the Arizona Department of Transportation oversees the process of designation and works with a governor appointed Parkways, Scenic and Historic Roads Advisory Committee. Arizona's Fredonia–Vermilion Cliffs Scenic Road/Highway 89A application report evaluation was based on the indicators of memorability, and assessed in terms of vividness, intactness, and unity of the scenic resource. In the report, the following descriptions were assigned to each of these terms:

- Vividness: the memorability of a visual impression; Assessed in terms of spatial definition, topographic relief, landmarks, skyline character, water form/riparian, vegetation, presence of man-made features, and adjacent landform features.
- Intactness: the integrity of the visual order in the natural and built environment, and the extent to which the landscape is free from visual encroachment; Considered in terms of naturalness and degree of conformity.
- Unity: the degree to which the visual resources join together to form a single, coherent, harmonious visual pattern; Measured by two factors – the degree of contrast and the unity of the overall landscape.

The Utah Scenic Byway Program works in partnership with the Utah Scenic Byway Advisory Committee on Utah's 27 state and national scenic byways in addition to various state and federal agency partners, county and local tourism offices, and other interested stakeholders. The Zion Scenic Byway Corridor Management Plan completed in February 2011 established the vision of the Byway, which is to preserve, enhance and protect the area's unique intrinsic resources for the benefit of visitors to, and residents of this area. According to the 2011 Plan, "all elements of the landscape landform, water, vegetation, and manmade development contribute to the quality of the corridor's visual environment". One of the Plan's Scenic Qualities – Strategies and Action is to protect the scenic vistas and enhance the visual characteristics of the Byway Corridor.

#### **5.3.16.1.5.1 *Fredonia-Vermilion Cliffs Scenic Road/Highway 89A*.**

The segment of Highway 89A from Bitter Springs to Fredonia was designated the Fredonia–Vermilion Cliffs Scenic Road after being inventoried in 1996. The route then traverses the base of Vermilion Cliffs, climbing to the Kaibab Plateau and into Kaibab National Forest. The roadway passes through the community of Jacob Lake and continues over Kaibab Plateau, extending into Fredonia. Views along the route range from wide open and panoramic in the plateau segments to highly enclosed within the national forest. A portion of the project alignments crosses this scenic road south of Fredonia, near MP 603.3, where the Navajo-McCullough transmission line corridor currently crosses the roadway. The Proposed Action would cross the scenic road near the bottom of a wide, open valley. Landforms are gently sloped, with rolling hills to the south and west. Views are open and panoramic in all directions, with Shinarump Cliffs visible in the distance to the north. Low, dense desertscrub vegetation covers the valley with a medium to fine texture of green and blue-gray foliage. The tall towers and transmission lines of the Navajo-McCullough utility corridor bisect the landscape, running in an east-west direction.

In the 1996 scenic road application report evaluation, the road was assessed in terms of distinct visual character units. Ratings of vividness, intactness, and unity for each unit were based on a seven digit scale from very high to very low, with seven being the highest rating and one being the lowest. In the 1996 evaluation the Johnson Run character unit scored a 2.9 in vividness, a 4.9 in intactness, and a 5.0 in unity, for a total unit score of 12.8. This total placed the Johnson Run unit in the moderately high range. The

Proposed Action would cross Highway 89A perpendicularly near MP 603.3, which is within the Johnson Run character unit of the Scenic Road.

#### **5.3.16.1.5.2 Zion Park Scenic Byway/Highway 9.**

This byway is a designated Utah State Scenic Byway offering both panoramic views over flat terrain and enclosed views surrounded by steep valley walls. The route begins at I-15 and extends eastward through the cities of Hurricane and LaVerkin, before ascending Hurricane Fault. The roadway then runs south of Hurricane Mesa through the city of Virgin; past the ghost town of Grafton; and through the communities of Rockville and Springdale. Immediately northwest of Springdale, the route enters Zion National Park, passing through two tunnels and offering scenic views of various prominent landforms. The roadway terminates at the Mount Carmel junction at Highway 89. Views to the west and south are open and panoramic, while Hurricane Mesa holds views to the north within the middleground. Green and gray vegetation is moderately dense and low in stature. The surrounding lands are mostly undeveloped, with some low-density rural and suburban housing development.

#### **5.3.16.1.6 Historic Trails.**

##### **5.3.16.1.6.1 Old Spanish National Historic Trail (Armijo Route).**

Designated as the 15th National Historic Trail by Congress in 2002, this trail was used primarily as a mule-pack trade route, connecting Santa Fe, New Mexico, to Los Angeles, California. The trail, which extends approximately 1,200 miles through unforgiving landscapes, is a combination of routes established by ancient Indian tribes, Spanish explorers, trappers and traders. The Armijo Route of the Old Spanish National Historic Trail was established between 1829 and 1830 by trader Antonio Armijo, who used a significant shortcut by stitching together previous routes of the Rivera and Dominguez-Escalante expeditions. Armijo's journey was the first commercial roundtrip journey. The proposed alignment would join the Armijo route near MP 4 on Highway 89 in Utah, where the trail exits the canyon that is now covered by Lake Powell's Wahweap Bay. The project alignments would then generally follow the trail for approximately 130 miles, although the exact route of the trail has yet to be formally established. Between Hurricane Cliffs and the Cliffs of Little Creek Mountain, the proposed alignments would split northward away from the trail. The NPS and BLM are currently developing a management plan and environmental impact statement for this historic trail.

##### **5.3.16.1.6.2 Dominguez-Escalante Historic Trail.**

Two Spanish friars, along with several other recruits, established the Dominguez-Escalante Trail in 1776 when they set out to find an overland route from Santa Fe, New Mexico, to the newly established settlement at Monterey, California. After abandoning its mission north of Cedarville, Utah, the expedition traveled south and east through the Arizona Strip en route to Santa Fe. Upon failing to cross the Colorado River near Lee's Ferry, the group found a superior location and crossed the river near Lake Powell's Padre Bay, which was subsequently named in the group's honor. The project would cross this historic trail in several locations. The first crossing would be near MP 553.5 on Highway 89 in Utah, where a portion of the project would cross perpendicular to the trail. Farther west, along White Sage Wash, the project would parallel the trail for approximately 10 miles, crossing it in one location. The project would then split from the trail, only to cross it again at the intersection of Mount Trumbull Road and the Navajo-McCullough transmission line corridor. Although the project would not cross the trail near Sand Hollow Reservoir, the alignments would be visible from the trail, approximately 1 mile to the east.

#### **5.3.16.1.6.3 Honeymoon Historic Trail.**

The Honeymoon Historic Trail emerged as young Mormon couples from Arizona settlements traveled by wagon or buggy to the St. George Temple to get married—during that time; this was the only Mormon temple west of the Mississippi. After crossing the Colorado River, the route follows the basic alignment of the Dominguez-Escalante Trail until it reaches White Sage Wash. From that point the trail extends through Kanab and Pipe Springs, before dropping to the south of Lost Spring Mountain. The route then joins with the Temple Historic Trail, descending Hurricane Cliffs and continuing on to St. George. The project alignments would cross this trail in several locations, the first being near MP 553.5 on Highway 89 in Arizona. In this location, the trail follows the Dominguez-Escalante Historic Trail; the project alignments would cross perpendicular to the trail. In White Sage Wash, the trail again follows a segment of the Dominguez-Escalante Historic Trail; at this point, a portion of the alignments would parallel the trail for approximately 7 miles. This segment of the alignments would cross the trail in one location before heading northward to Kanab. East of Kanab, a portion of the alignments would cross the trail near the intersection of Highway 89 and Lost Spring Wash. This segment of the alignments would cross the trail again near MP 15 on Highway 89. Shortly after this point the trail passes through Pipe Springs. As the trail continues westward, the alignments would cross the trail again, near Maroney Well. High atop Hurricane Cliffs, the alignments would not cross the trail but would be within the middleground where Honeymoon Historic Trail and Temple Historic Trail join and descend the cliffs.

#### **5.3.16.1.6.4 Temple Historic Trail.**

Between 1874 and 1876, early settlers constructed the Temple Historic Trail to haul timber from Mount Trumbull to St. George, Utah, for the construction of the first Mormon temple west of the Mississippi River. This historic wagon road, which actually consists of two separate routes, is approximately 80 miles long. The eastern route of this trail is joined by Honeymoon Historic Trail before it drops through Hurricane Cliffs just southwest of Little Creek Mountain. The proposed alignment would not cross Temple Historic Trail, but the trail would be within the middleground of the proposed alignments before descending the cliffs.

#### **5.3.16.1.7 Special Management Areas.**

##### **5.3.16.1.7.1 Areas of Critical Environmental Concern.**

**5.3.16.1.7.2** The designation of ACECs was mandated by Congress through the Federal Land Policy and Management Act to manage areas of BLM land that contain truly unique and significant resource values. ACECs are areas where special management attention is necessary to protect and prevent irreparable damage to important historic, cultural and scenic values; wildlife resources; or other natural systems and processes or to protect human life and safety from natural hazards. The designation is a record of significant values that must be accommodated when considering future management actions and land use proposals. ACECs are individually managed to more specifically protect a particular resource or natural hazard of concern.

Of the ten ACECs that are located within the project vicinity, six ACECs (Johnson Spring, Kanab Creek, Lone Butte, Moonshine Ridge, Shinarump, and Canaan Mountain) have scenic values that contributed to their designation as an ACEC. The Kanab Creek ACEC is the only such area that is directly crossed by a proposed alignment. This occurs in two locations on the Proposed Action alignment: first at Kanab Creek and again at Bitter Seeps Wash.

#### **5.3.16.1.7.3 Wilderness Areas and Wilderness Study Areas.**

WAs areas have been established by Congress through the Wilderness Act of 1964 to protect federally-managed land with pristine, undisturbed natural areas and scenery. These areas are subject to common management restrictions aimed at preserving areas in their natural condition for use by the general public. Five wilderness areas are located within project vicinity along the project alignments: Canaan Mountain (Utah), Paria Canyon–Vermilion Cliffs (Utah and Arizona); Cottonwood Point (Arizona and Utah); Cottonwood Canyon (Utah), Cottonwood Forest (Utah), and Paria Canyon–Vermilion Cliffs (Utah and Arizona). Pine Valley Mountain (Utah). The proposed alignments would not cross these areas at any point.

WSAs are regions that have been inventoried and recommended for WA designation by Congress. Although WSAs are not designated areas, they are required to be managed to maintain their inherent wilderness characteristics until Congress decides to either designate the areas or release them for other uses. The general management standard for WSAs focuses on protecting the areas from changes that would potentially impair their suitability as WAs. Wilderness and WSAs are managed as VRM Class I. Some WSAs also have specific restrictions that limit activities previously allowed in the areas, such as grazing. Six WSAs, all located in Utah, are within the project vicinity of the project alignments: Wahweap; Cockscomb; Paria-Hackberry; Canaan Mountain; and Cottonwood. The project alignment would closely parallel the Cockscomb WSA for approximately 6 miles between MP 18.5 and MP 24.5 on Highway 89 in Utah.

#### **5.3.16.1.7.4 National Monuments.**

There are two national monuments within the project area managed by the BLM – GSENM and VCNM. The GSENM was established in September 1996 by President Clinton under the authority of the 1906 Antiquities Act. The GSENM consists of approximately 1.8 million acres of federal land as well as about 15,000 acres of lands within the GSENM boundary that are privately owned in Kane and Garfield counties in Utah. It was created to protect an array of outstanding historic, biological, geological, paleontological, and archaeological resources. Per Public Law 105-355, signed by President Clinton on October 31, 1998, a utility corridor was designated along Highway 89 in Kane County, including that portion of Highway 89 within the GSENM. The utility corridor extends 240 feet north from the center line of the highway, and 500 feet south from the center line of the highway. This utility corridor was considered to contain the proposed Lake Powell water pipeline (BLM, 1999).

The VCNM was established in November 2000, by President Clinton to “protect an array of scientific, biological, geological, hydrological, cultural, and historical objects” (BLM, 2008a). Located in northern Coconino County, Arizona, VCNM contains 279,566 acres of BLM-administered lands, 13,438 acres of Arizona State Trust lands, and 683 acres of private land. Located in a remote section of northern Arizona, accessible from Highways 89 and 89A via House Rock Valley Road, this area includes spectacular geologic formations.

#### **5.3.16.1.7.5 Special Recreation Management Areas.**

The BLM designates recreation management areas (RMAs) and the areas are classified as either a special recreation management area (SRMA) or an extensive recreation management area (ERMA). These RMAs are recognized as producing high-quality recreation opportunities and offering beneficial outcomes for recreation participants, recreation tourism partners, visitor service providers, and communities. Objectives in RMAs are recognized as a primary resource management consideration, and specific management is required to protect the recreation opportunities. The SRMAs within the foreground and/or middleground of the various project components are Canaan Mountain, Fredonia, Sand Hills, Sand Mountain, and St. George Basin. The Arizona Strip ERMA is also within the foreground and/or middleground project area.

#### **5.3.16.1.8 Sand Hollow State Park.**

Located about 10 miles east of St. George and about 5 miles southwest of Hurricane, the Sand Hollow Reservoir and surrounding lands have been designated one of Utah's newest state parks. Warm water fishing and boating opportunities are found here. This 20,000 acre park is on WCWCD land, and is one of the most visited destinations in the Utah State Park System (USP, 2009). The park includes an entry station and large parking lot next to the Sand Hollow Reservoir, along with a comfort station and an OHV accessible campground located along the south shore of the reservoir. Primitive camping is available along the east and south shores of the reservoir.

#### **5.3.16.1.9 Kaibab Paiute Indian Reservation.**

The Kaibab-Paiute Indian Reservation encompasses more than 120,000 acres in northern Arizona, just southwest of the town of Fredonia. The Kaibab Band of Paiute Indians tribal headquarters is located along the north side of Highway 389, adjacent to PSNM. The Kaibab-Paiute Indian Reservation is located within the Colorado Plateau and consists of benches, mesas, buttes, narrow canyons, valleys, and cliffs. The vegetation is predominately by a mix of sage, grasses, and pinyon-junipers.

#### **5.3.16.1.10 Navajo Nation.**

The Navajo Nation extends into the states of Utah, Arizona, and New Mexico, covering over 27,000 square miles. The portion of the Navajo Nation within the project area lies within the middleground of the South Alternative and is part of the Tuba City Chapter. This area of the Navajo Nation is located within the Colorado Plateau physiographic province and characterized by the distinct landforms of the towering red Vermilion Cliffs of Navajo sandstone cliffs, Marble Canyon, and Navajo Mountain as well as the perennial Colorado River. Vegetation is sparse and low, dominated by sage and grasses, which affords long, sweeping vistas of the surrounding panoramic landscape.

### ***5.3.16.2 Environmental Effects***

Environmental consequences in terms of visual or scenic resource effects are defined as the change in aesthetic value resulting from the introduction of modifications to the landscape. For this assessment, effects on visual resources were evaluated in terms of their overall direct and indirect effects. Cumulative effects for the project are discussed in Section 5.3.16.4 of this assessment. The determination of conformance with the BLM management objectives is also addressed in this section.

Each of the VAUs was evaluated in terms of the anticipated magnitude of change in landscape character and the level of contrast of the proposed pipeline alignment and associated surface facilities from sensitive viewing platforms. This analysis was based on the relative change in landscape character within the VAU and the change in the views from specific sensitive viewing platforms that would be created by the proposed alignment and surface facilities and disturbances. The magnitude of change for each VAU and each sensitive viewing platform was based on their visual dominance, scale, continuity, and level of contrast as categorized as very low/negligible, low/subtle, moderate/notable, high/substantial, or very high/severe for the pipeline alignment and proposed facilities in the foreground and middleground distance zones. The definition of the thresholds for each level of potential effect is provided in Table 5-135.

Per the BLM's Visual Contrast Rating System, contrast-rating forms were prepared to assess potential visual effects of the Project alternatives (refer to Visual Resource Study Report). The points at which the ratings were taken were determined through coordination with BLM representatives and correspond with the key observation points (KOPs) along the proposed alignment, regardless of jurisdiction. KOPs are locations along a travel route or at a use area or a potential use area, where project components would be

viewed by the casual observer. The selected KOPs are locations along a travel route or at a use area or a potential use area, where project components would be viewed by the casual observer. The KOPs are areas considered to have high level of visual sensitivity with potential views of the project components within the foreground and middleground distance zone of the sensitive viewing platform. The rating forms assisted in revealing the elements and features in the proposed alternative that would cause the greatest effect on the existing visual conditions.

To support the contrast rating process and the evaluation of effects, simulations of the pipeline and associated facilities were prepared from selected locations. Of the 35 sets of digital visual simulations, 34 were associated with KOPs within the area of potential effect of the project components. The simulations were generated for the assessment to approximately depict the visual effects of the project over time. The locations for the simulations were determined through coordination with BLM and NPS representatives. The simulation sets illustrate existing conditions, immediate post-construction conditions, and conditions at 5 to 10 years after construction. Short-term effects connected to construction related activities would be the same for the views from KOPs and other sensitive viewing platforms as noted in the magnitude of change to the characteristic landscape in the foreground and middleground distance zones.

The direct effects also consider the visibility of the project. The visibility analysis of the Proposed Action identified all areas that would be seen within the foreground and middleground of the alignment (refer to Visual Resource Study Report). The project alignments were also evaluated in terms of effects on visibility over time: short-term effects were defined as effects that would be seen immediately after construction and long-term effects were effects that would persist for the duration of the project. Figure 5-196 provides the location of the VAU, KOPs, and other sensitive viewing platform along with the BLM VRM classes.

Table 5-135 provides a summary description of the effects on each VAU and the sensitive viewing platforms located within that VAU for all of the water pipeline alternatives as well as the power generating alternatives. Where magnitude-of-change range is assigned for the facilities within a VAU, the range reflects differing degrees of contrast for multiple facilities within that VAU. The ranges for views from platforms in Table 5-135 also reflect differing degrees of contrast from multiple viewing platforms within the VAU. Effects to designated scenic roads and byways, historic trails, special management areas, national monuments, and to the Kaibab-Paiute Indian Reservation and Navajo Nation are evaluated for each alternative. Specific effects to the GCNRA and GSENM are discussed as part of the VAU and sensitive platform analysis.

This assessment of visual effects includes evaluation of the overall significance of effects on the visual landscape as well as an assessment of the effects of individual project components. Effects on visual resources are considered significant if construction, operation, or maintenance activities would result in any of the following conditions:

- Magnitude of change from existing visual character to post-project visual character that is considered to be substantial within the foreground distance zone.
- Project feature construction for operations visible within the foreground distance zone from an area of high visual sensitivity attracting attention away from existing landscape conditions and resulting in a fundamental and visually incompatible change in the existing setting.
- High level of landscape modification visible within the foreground distance zone from an area of high visual sensitivity, e.g., residence, non-motorized trail, or high volume roadway

- Non-conformance with VRM objectives that would require an amendment to the relevant federal resource management plan to change the VRM class.
- Nonconformance with other agencies' scenic management plans

#### **5.3.16.2.1 Potential Effects Eliminated From Further Analysis.**

Potential effects eliminated from further analysis include visual effects from daytime operation of project facilities. Visual effects would occur during construction and with the permanent, visible facilities. Constructed project facilities that are visible would incorporate mitigation measures to reduce visual effects and there would be no further effects during operation. For nighttime operation, motion-sensitive switches would be incorporated into the design of the facilities as standard construction practice; therefore, the areas at the sites would only be illuminated if there were operational activities underway or if there were a potential security issue. Potential effects on the night sky from project lighting were eliminated from further analysis.

**Table 5-135**  
**Magnitude of Change in Landscape Character and Level of Contrast from**  
**Sensitive Viewing Platforms Impact Thresholds**

<b>Level of Impact</b>	<b>Definition</b>
Very Low (Negligible)	Landscape character remains intact with no apparent change to existing visual elements (line, form, color and texture) or pattern character (dominance, scale, diversity and continuity) because project components would not be visible or perceived in the landscape.
Low (Subtle <sup>1</sup> /Weak <sup>2</sup> )	Magnitude of change to existing landscape character is <b>subtle</b> . Changes in visual pattern elements or pattern character do not attract attention and would be visually subordinate in the visual setting. Project components would create <b>weak</b> contrast in the landscape and would be generally compatible with the visual setting when viewed from a sensitive viewing platform.
Moderate (Notable/Moderate)	Magnitude of change to existing landscape character is <b>notable</b> . Changes in visual pattern elements or pattern character would attract attention and would be visually prominent in the visual setting. Project components would create <b>moderate</b> contrast in the landscape and would be only somewhat compatible with the visual setting when viewed from a sensitive viewing platform.
High (Substantial/Strong)	Magnitude of change to existing landscape character is <b>substantial</b> . Changes in visual pattern elements or pattern character would begin to dominate the visual setting. Project components would create <b>strong</b> contrast in the landscape and would generally be incompatible with the visual setting when viewed from a sensitive viewing platform.
Very High (Severe/Very Strong)	Magnitude of change to existing landscape character is <b>severe</b> . Changes in visual pattern elements or pattern character would dominate the visual setting. Project components would create <b>very strong</b> contrast in the landscape and would be highly incompatible with the visual setting when viewed from a sensitive viewing platform.

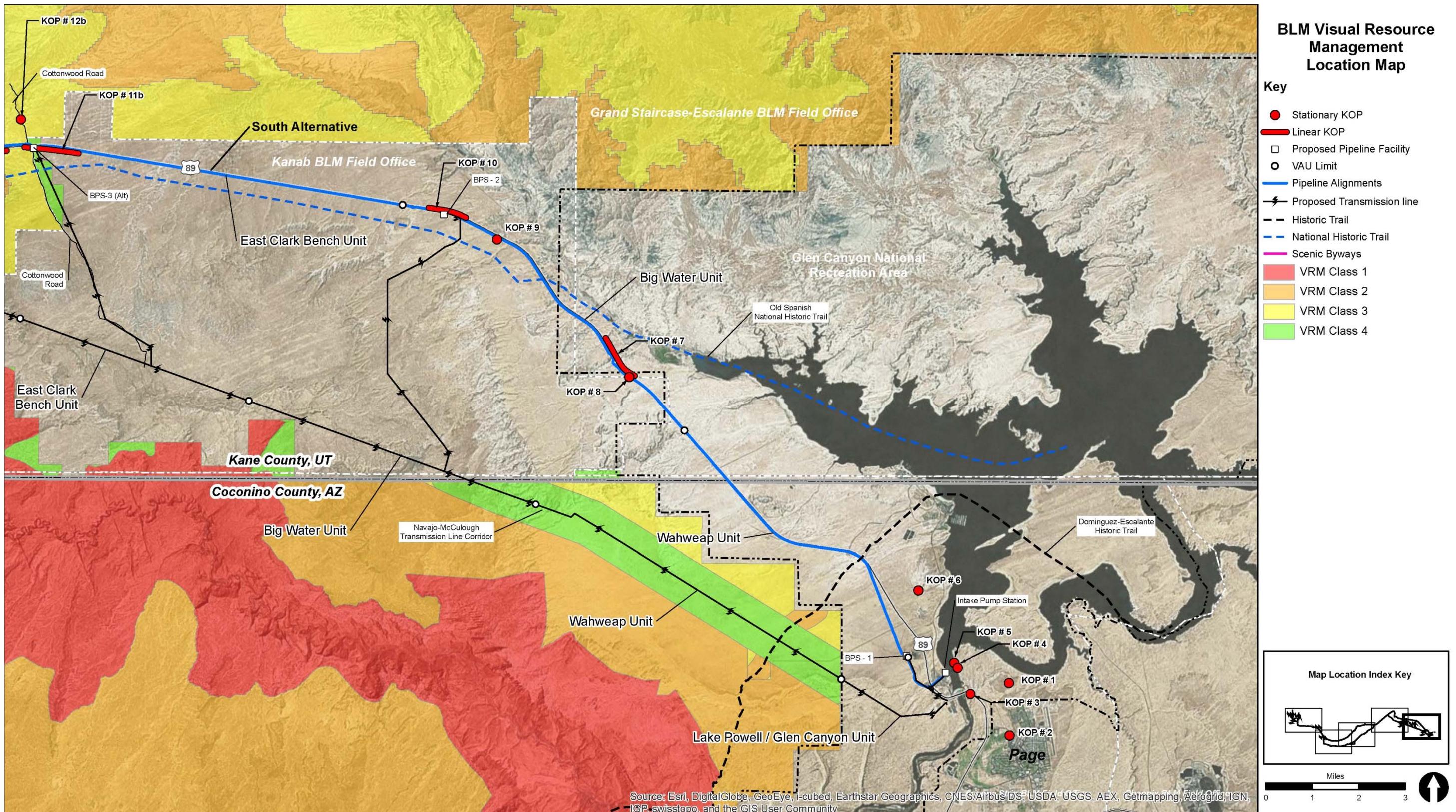
Source: Logan Simpson

(1) Magnitude of change to existing characteristic landscape.  
(2) Level of contrast when viewed from sensitive viewing platform.

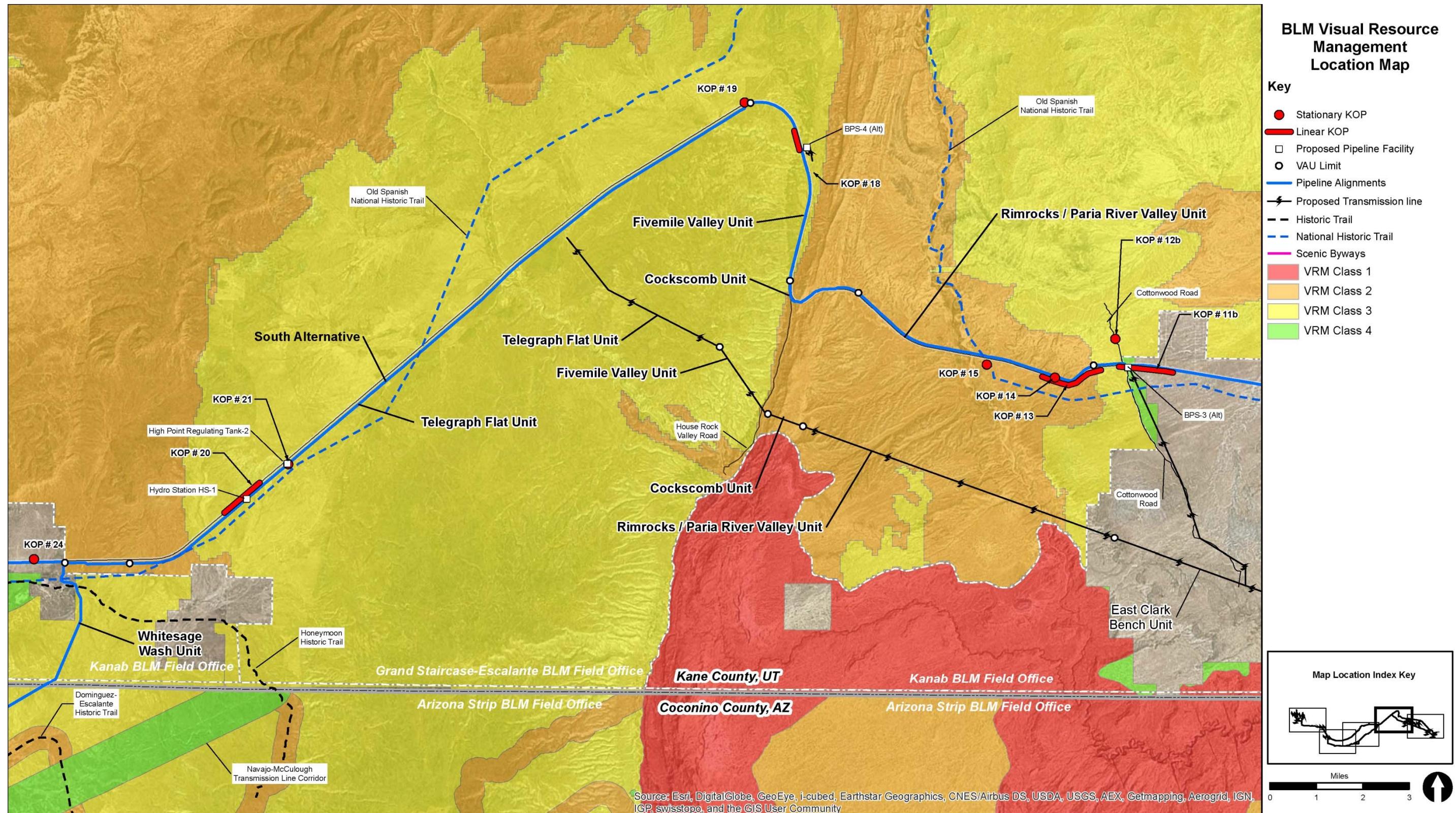
The following section describes the direct effects on the project area as they occur in each VAU and for views from the sensitive platforms. The proposed pipeline and penstock disturbances are addressed separately from proposed facilities because the facilities visual effects generally differ in form, line, color, and texture.

#### **5.3.16.2.2 Proposed Action.**

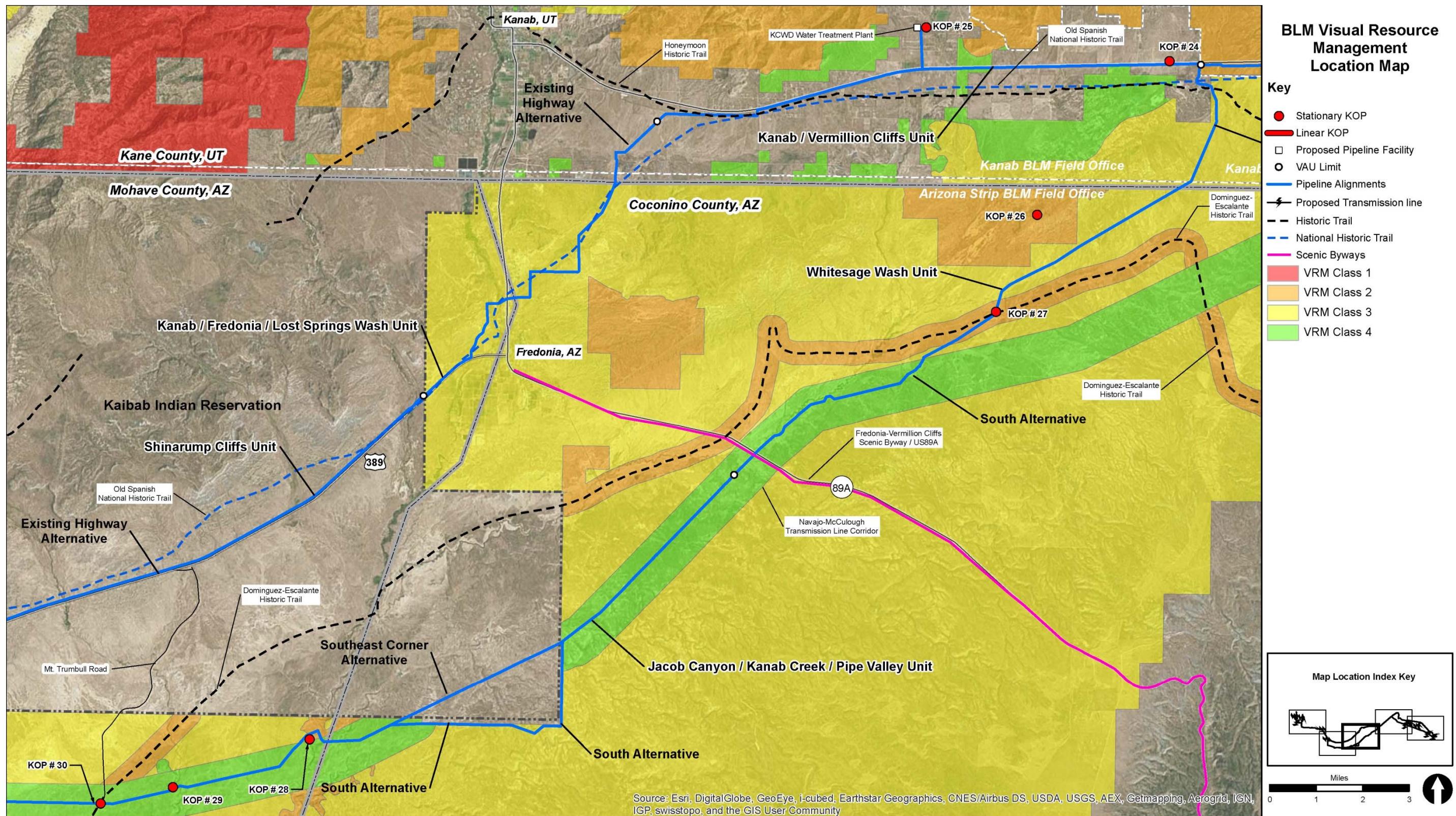
The following subsections qualitatively describe the potential direct effects on the VAUs and sensitive viewing platforms from the Proposed Action. Effects are described from east to west. Table 5-136 catalogs the simulations by name and number; provides the KOP at which each simulation was generated; and provides the VAU in which each simulation was located. In addition Table 5-137 summarizes the direct effects on the landscape character and to the views from the sensitive viewing platforms.



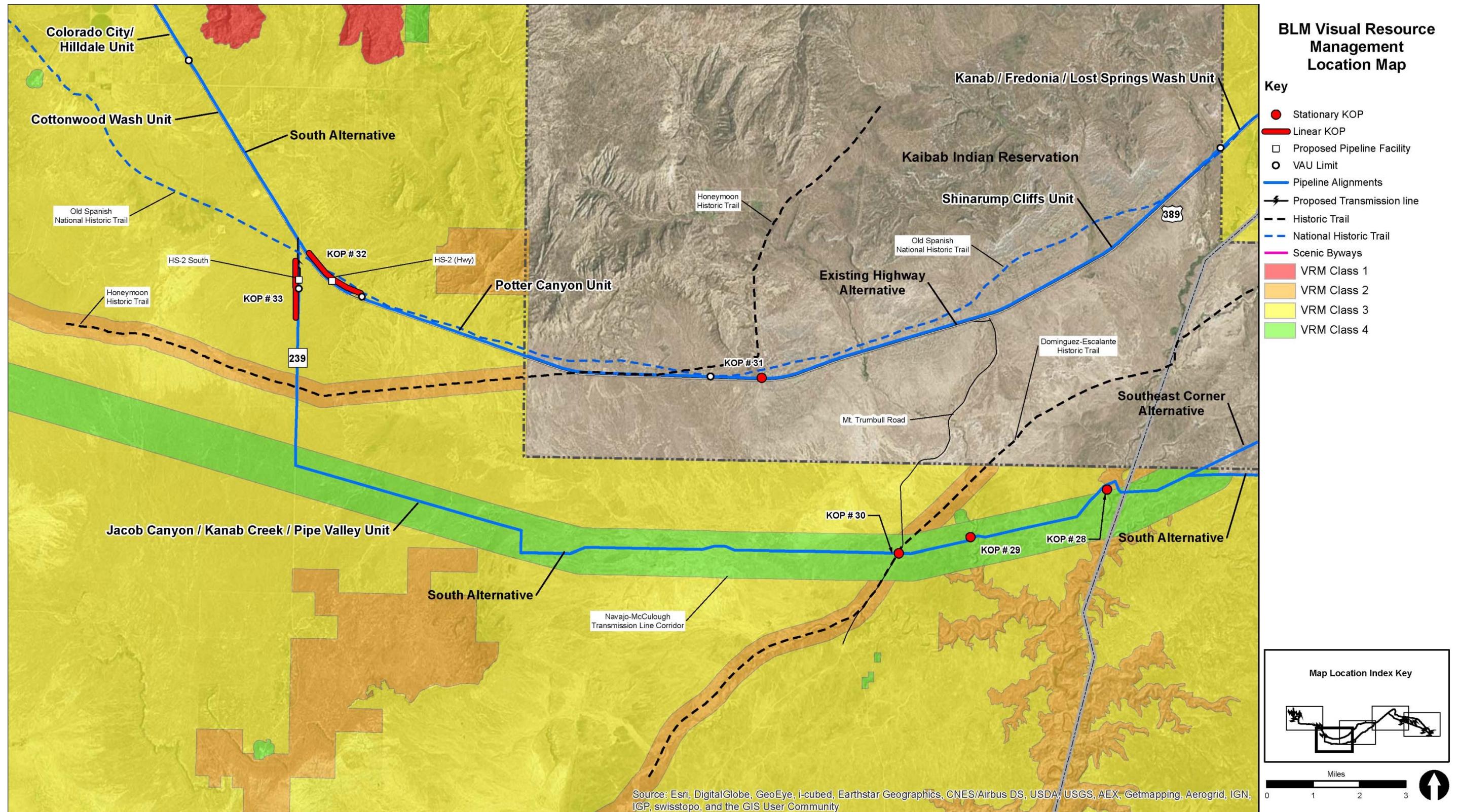
**Figure 5-196**  
Sensitive Viewing Platforms



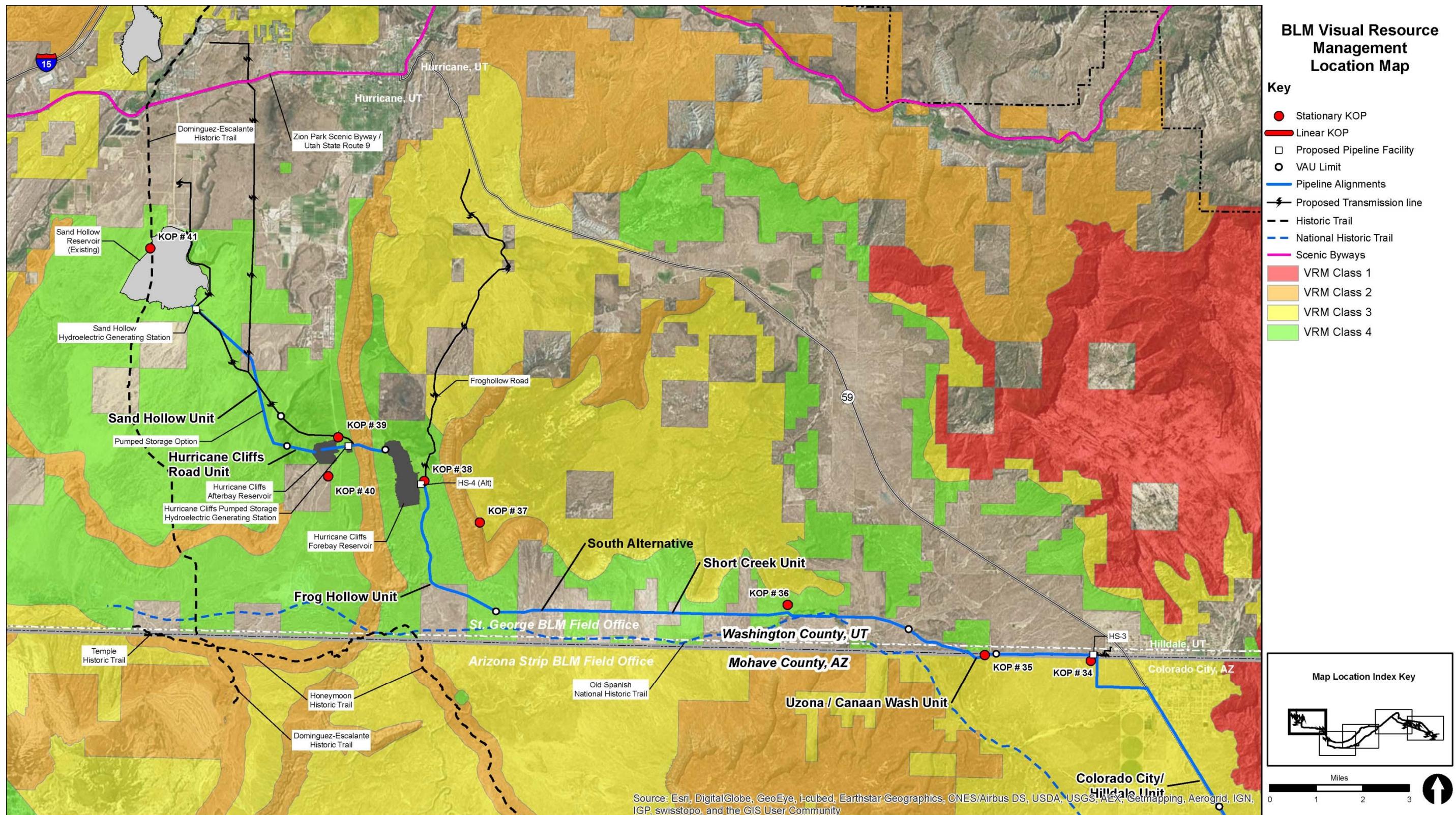
**Figure 5-197**  
Sensitive Viewing Platforms



**Figure 5-198**  
Sensitive Viewing Platforms



**Figure 5-199**  
Sensitive Viewing Platforms



**Figure 5-200**  
Sensitive Viewing Platforms

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<p><b>1. Lake Powell/Glen Canyon</b></p>  <p>Proposed Action (South Alternative)</p> <p>Intake Pump Station</p> <p>BPS-1</p> <p>Electric Transmission System Power Alternative (Water Intake Transmission Line; BPS-1 Transmission Line; Glen Canyon to Buckskin Substation Transmission Line)</p> <p>This VAU includes the following stationary/linear KOP and linear platforms:</p> <ul style="list-style-type: none"> <li>• Stationary KOPs:           <ul style="list-style-type: none"> <li>#1 Potato Hill</li> <li>#2 Former McDonalds Parking Lot</li> <li>#3 Gravel Pullout near Bridge</li> <li>#4 Chains Day Use Area</li> <li>#5 Lake Powell Lake Surface</li> </ul> </li> <li>• Other Linear Platforms:           <ul style="list-style-type: none"> <li>Old Spanish NHT</li> <li>Dominguez-Escalante HT</li> <li>Honeymoon HT</li> <li>Highway 89</li> </ul> </li> </ul>	<p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• <b>Short-term</b> - Ground-disturbing activities associated with the Proposed Action would remove a uniform band of low, sparse vegetation, expose lighter soils, and cut through occasional rock formations including clearing large rectangular shapes in the landscape for the staging areas (approximately 40 acres), Intake Pump Station and the BPS-1 facility sites. These effects would create a subtle degree of change in the landscape character in the foreground and no apparent degree of change in the middleground because of the sparse vegetation density and the presence of similar cultural modifications and areas of disturbance within the VAU.</li> <li>• <b>Long-term</b> - The existing lines, forms, colors and visual patterns of the cultural modifications (i.e., existing transmission lines, substation, Glen Canyon Dam, and development associated with the city of Page) present within this VAU would diminish the visual prominence of the Proposed Action including the Intake Pump Station, and BPS-1 facilities. The BPS-1 facility would be located near an existing ADOT maintenance facility and the lines and forms of this facility would be similar in scale and form to the existing structures at that facility. In the long-term, the Proposed Action would create a subtle change in the foreground because it would repeat the elements and patterns common in the characteristic landscape and not attract attention. This alternative would create a negligible magnitude of change in the middleground of the VAU because it would there would be no apparent change in the characteristic landscape.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Stationary KOPs</b> - There would be unobstructed foreground views of the Intake Pump Station that would be located along the reservoir's shoreline from KOP #4 and KOP #5. This facility would begin to attract attention and be only somewhat compatible because the form and line of the project components would create a moderate contrast in the setting in the foreground of these two stationary KOPs. The BPS-1 facility would be located in the middleground and would not be visually apparent. The existing ADOT maintenance facility would help to screen this facility from view from KOP #4 and KOP #5. The proposed Intake Pump Station and BPS-1 facilities would be in the middleground view from KOP #1, KOP #2, and KOP #3. The proposed facilities would not be visible from KOP #1. There would be no apparent change in the landscape character when viewed from KOP #2 and #3 because the project components would not be visually evident.</li> <li>• <b>Other Linear Platforms</b> - Proposed project features would be visible intermittently in the middleground from the Old Spanish NHT, Dominguez-Escalante HT, and Honeymoon HT. However, the project components would not be visually evident from these three trails due to the distance and the prominence of existing cultural modifications within the VAU. There would be no apparent change in the landscape character when viewed from these three linear platforms. The project components would create a subtle change in the foreground views from Highway 89 because they would repeat the visual elements and patterns associated with the cultural modifications found in the existing setting. The Proposed Action would not be visually evident in the middleground views from Highway 89. The Proposed Action would create a weak contrast when viewed in the foreground from Highway 89 and have a negligible effect on middleground views.</li> </ul>	<p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• There would be no new substations located within the VAU.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Short-term</b> - The clearing of the vegetation for the structures would be a relatively small, circular clearing (approximately 36 inches in diameter for each pole) that would occur along the alignment at approximately every 750 feet. There would be no new access roads needed for construction. The Electric Transmission System Alternative would create a negligible change in the landscape character in the foreground and in the middleground because of the very small area that would be cleared of vegetation.</li> <li>• <b>Long-term</b> - The landforms in the landscape would provide a backdrop that would reduce the visibility of the transmission line structures. The proposed transmission lines would be similar in form and scale to the existing Garkane Glen Canyon to Buckskin Transmission Line. The visual elements and patterns of the proposed Electric Transmission System Alternative would repeat those found in the existing landscape setting. In the long-term, this alternative would create a subtle degree of change in the landscape character in the foreground of the alternative and no apparent degree of change in the middleground.</li> </ul>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<p><b>2. Wahweap</b></p> <p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p>  <p>Proposed Action (South Alternative)</p> <p>Electric Transmission System (Glen Canyon to Buckskin Sub Transmission Line)</p> <p>This VAU includes the following stationary/ linear KOP and linear platforms:</p> <ul style="list-style-type: none"> <li>• Stationary KOPs: #6 Wahweap Overlook</li> <li>• Other Linear Platforms: Old Spanish NHT Dominguez-Escalante HT Highway 89</li> </ul>	<p><b>Direct Impacts from Pipeline (Foreground/Middleground)</b></p> <p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• <b>Short-term</b> -Ground-disturbing activities would remove a uniform band of low, stippled vegetation, expose lighter soils, and cut through occasional rock formations and washes. Uniform removal of vegetation and exposure of lighter-colored soil for the water pipeline and the approximately 34 acres of staging areas would attract attention in the foreground of the VAU in the short-term. This alternative would create a notable change in the foreground because of the introduction of new distinct, uniform lines and rectangles in the landscape that would be visually prominent. The Proposed Action would create a subtle change in the middleground because the project components would be visually subordinate from viewed from this distance.</li> <li>• <b>Long –term-</b> The forms and lines of the proposed alignment would be consistent with forms and lines already present in the VAU. The pipeline alignment would pass over rolling landforms. The disturbance area created by the uniform pipeline corridor would be more visually prominent in the foreground and would draw attention from the natural setting, which would result in a notable change in the landscape character. In the middleground, the project components would not be visually evident, creating a negligible degree of change in the characteristic landscape.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Stationary KOPs</b> – The proposed pipeline in the Wahweap VAU would be in the middleground of the views from KOP #6. There would be no apparent change in the setting when viewed from this stationary KOP because the proposed project and related components would not be discernible/visually evident within the middleground.</li> <li>• <b>Other Linear Platforms</b> - Proposed project features would also be seen intermittently from the middleground of the Old Spanish NHT, and the project components would not be visually evident due to the distance and discernibility. The proposed pipeline would cross the Dominguez-Escalante HT near Milepost (MP) 553.5 on Highway 89 in Arizona. Views of the Proposed Action from this trail would be consistent with the lines and form of Highway 89, which the project would primarily parallel in this area. The effect of the views from the Dominguez-Escalante HT would be subtle in the foreground because the form and line of the proposed project would be consistent with the existing lines and form of the highway. Since the Proposed Action would parallel the Highway 89 for the most part within this VAU, foreground views of the project components would be unobstructed and continuous. The effect on the foreground view from Highway 89 would be notable and only somewhat compatible with the visual setting because the project components would create a moderate contrast in terms of form, color, and line. The project components would have a negligible effect on views in the middleground from the Dominguez-Escalante HT and Highway 89 because the Proposed Action would repeat elements and patterns common in the view from these linear platforms.</li> </ul>	<p><b>Direct Impacts from Electric Transmission System (Foreground/Middleground)</b></p> <ul style="list-style-type: none"> <li>• There would be no new substations located within the VAU.</li> </ul> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• <b>Short-Term</b> – The clearing of the vegetation for the structures would be a relatively small, circular clearing (approximately 36 inches in diameter for each pole) that would occur along the alignment at approximately every 750 feet in addition to an approximately 8 acres of land for a staging area. There would be no new access roads needed for construction. In the short-term, the Electric Transmission System Alternative would create a subtle change in the landscape character in the foreground and a negligible change in the middleground because of the relatively small areas that would be cleared of vegetation.</li> <li>• <b>Long-Term-</b> The pole structures would be the same as the existing Garkane Glen Canyon to Buckskin Transmission Line, which the proposed electric power generating alternative would parallel within this VAU. The presence of the existing transmission lines and structures within this VAU would diminish the visual prominence of the Electric Transmission Power Alternative. In the long-term, this alternative would result in a subtle change in the characteristic landscape because the project components would create a weak level of contrast in terms of line, form, and texture in the foreground and would not be perceived in the middleground.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Stationary KOPs</b> – The proposed transmission line would be in the middleground of the views from KOP #6 and would be intermittently visible with Paria Plateau providing a backdrop. The proposed project and related components would not be visually evident within the middleground because of the distance away from the stationary platform that the alternative would be located.</li> <li>• <b>Other Linear Platforms</b> - Proposed project features would also be seen intermittently from the middleground of the Old Spanish Trail NHT and Highway 89. The project components would not be visually evident from these two linear platforms due to the distance and presence of the prominent landforms as backdrops within the VAU. An approximately -8-acre staging area would be adjacent to the Dominguez-Escalante HT. It would create a moderate contrast in the short-term in the foreground of this portion of the trail and would be somewhat compatible in the visual setting. The proposed transmission line would cross the Dominguez-Escalante HT and the form and line of the proposed project would be consistent with the existing lines and form of the Garkane Glen Canyon to Buckskin Transmission Line. The effect of the views from this HT would be subtle in the foreground because it would result in a weak level of contrast in terms of scale, line, and form. The project components would have a negligible effect on views that would be located in the middleground because it would repeat elements and patterns common in the view from this platform.</li> </ul>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<p><b>3. Big Water</b></p>  <p>Proposed Action (South Alternative)</p> <p>BPS-2</p> <p>Electric Transmission System (Glen Canyon to Buckskin Sub Transmission Line, BPS-2 Transmission Line)</p> <p>This VAU includes the following stationary/linear KOP and linear platforms:</p> <ul style="list-style-type: none"> <li>• Stationary KOPs:           <ul style="list-style-type: none"> <li>#8 Highway 89/Larkspur Road Intersection</li> <li>#9 GSENM Visitor Center</li> </ul> </li> <li>• Linear KOPs:           <ul style="list-style-type: none"> <li>#7 Highway 89 at Blue Pool Wash</li> <li>#10 BPS-2 from Highway 89</li> </ul> </li> <li>• Other Linear Platforms:           <ul style="list-style-type: none"> <li>Old Spanish NHT</li> <li>Highway 89</li> </ul> </li> </ul>	<p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• <b>Short-Term-</b> Ground-disturbing activities would remove a uniform band of low to medium height, stippled vegetation, expose lighter soils, and cut through occasional rock formations and washes. The disturbance area created by the uniform pipeline corridor and the large rectangular BPS-2 building site and approximately 38 acres of staging areas would be visually prominent in the foreground. The project components would draw attention from the characteristic landscape in the short-term. The forms and lines of the proposed alignment would be consistent with existing elements and patterns already present in the VAU. Uniform removal of vegetation and exposure of lighter-colored soil would create a notable change in the short-term because of the distinct, uniform lines in the rolling terrain that would attract attention in the foreground. The proposed alignment would be drilled below a large rock formation west of Blue Pool Wash, which would avoid surface disturbance to the rock formation. In this rolling terrain, the water pipeline may be intermittently visible in the middleground as the uniform line and exposed light colored soils would be exposed on the sloped portions of landforms that are scattered throughout the landscape. This would result in a subtle change in the characteristics landscape in the middleground in the short-term.</li> <li>• <b>Long-Term-</b> The presence of the BPS-2 facility would create a substantial degree of change to the landscape by introducing an industrial facility into a remote rural area. The vertical lines and rectangular forms of the BPS-2 would begin to dominate the landscape in the foreground. In the middleground, the project components would not be visually evident, creating a negligible degree of change in the characteristic landscape.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Stationary KOPs</b> –Foreground views of the Proposed Action from KOP #8 and KOP #9 would be consistent with the lines and form of Highway 89. In addition, foreground views from KOP #9 include unobstructed views of the cultural modifications associated with the community of Big Water. The effect on the foreground views from these two stationary KOPs would be subtle because proposed project components would create a weak contrast and be visually subordinate to the existing visual elements and patterns in the setting. Within the middleground, the proposed water pipeline and BPS-2 when viewed from either of these two KOPs would not be visually evident.</li> <li>• <b>Linear KOPs</b> –Foreground views of the Proposed Action from KOP #7 would be consistent with the lines and form of Highway 89. The effect on the foreground views from this KOP would be weak contrast because the form and line of the proposed project would be consistent with the existing line and form of the highway. The proposed project components effect on the views from the KOP #10 would be a strong level of contrast because BPS-2 would be intermittently silhouetted against the skyline in both eastbound and westbound directions and would be visually dominant in the foreground. Within the middleground, the proposed water pipeline and BPS-2 when viewed from either of these two linear KOPs would not be visually evident.</li> <li>• <b>Other Linear Platforms</b> - The proposed pipeline would cross the Old Spanish NHT near MP 6 on Highway 89 in Utah. Foreground views of the BPS-2 from the trail would be unobstructed and visually prominent in the landscape. The effect on the views from the portion of the Old Spanish NHT within the VAU would be substantial because the form and line of the proposed project components would be a strong level of contrast. In addition, there would be two staging areas cleared of vegetation (approximately 13.5 and 4 acres) within the foreground of the NHT in the short-term. The proposed alignment would closely parallel each of the four linear viewing platforms in this VAU and would result in nearly continuous visibility of the pipeline along each platform. Within the middleground, the proposed water pipeline and BPS-2 when viewed from either of Highway 89 or Old Spanish NHT would be negligible because the components would not be visually evident.</li> </ul>	<p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• There would be no new substations located within the VAU.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Stationary KOPs</b> – The two proposed transmission lines would be in the middleground of the views from KOP #8 and KOP #9. The contrast created by the proposed project and related components when viewed from either of these stationary KOPs would be subtle because the components would be backdropped by landforms and intermittently visible in the middleground.</li> <li>• <b>Linear KOPs</b> – The Electric Transmission System Alternative would also be seen intermittently in the middleground from KOP #7 and in the foreground and middleground of KOP #10. The level of contrast created by the transmission lines and structures when viewed from these linear KOPs in the middleground would be negligible because the project components would backdrop by landforms and intermittently visible. The effects to the foreground views from KOP #10 would be subtle because of the weak level of contrast that would be created by this alternative in terms of form and line.</li> <li>• <b>Other Linear Platforms</b> - The proposed transmission line would cross the Old Spanish NHT and the form and line of the proposed project would be consistent with the existing lines and form of the existing Garkane Glen Canyon to Buckskin Transmission Line. The effect of the views from this NHT and Highway 89 would be subtle in the foreground because it would result in a weak level of contrast. Proposed project features would also be seen intermittently in middleground views from the Old Spanish NHT and Highway 89. The project components would have a negligible effect on views that would be located in the middleground because it would not be visually evident in the characteristic landscape.</li> </ul>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<b>4. East Clark Bench</b>  Proposed Action (South Alternative) BPS-3(Alt) Electric Transmission System (Glen Canyon to Buckskin Sub Transmission Line, BPS-3 [Alt.]) Transmission Line  This VAU includes the following stationary/linear KOP and linear platforms: <ul style="list-style-type: none"> <li>• Stationary KOPs: 12 b BPS-3 (Alt.) HP Regulation Tank1 from Cottonwood Road</li> <li>• Linear KOPs: #11b BPS-3 (Alt.) HP Regulation Tank1 from Highway 89</li> <li>• Other Linear Platforms: Old Spanish NHT Highway 89</li> </ul>	<p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• <b>Short-Term-</b> Ground-disturbing activities would remove a uniform band of low, scattered vegetation, expose lighter soils, and cut through occasional small washes. Uniform removal of vegetation and exposure of lighter-colored soil from the project components including the approximately 47 acres of staging areas would introduce distinct lines and forms into the landscape during construction. The project components would be visually subordinate in the setting and would result in subtle changes in the foreground and negligible changes in the middleground of the VAU.</li> <li>• <b>Long-Term-</b> The line and form of the proposed water pipeline disturbance would be consistent with the line and form of the existing highway that it would parallel. The vertical lines and rectangular forms of the BPS-3 (Alt.) would create a notable change in the characteristic landscape and the facility would begin to dominate the setting in the foreground. In the middleground of the VAU, the project components would not be visually evident, creating a negligible change in the characteristic landscape.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Stationary KOPs</b> – Middleground views from KOP #12b would be unobstructed. The level of contrast that would be created by the proposed water pipeline and BPS-3 (Alt.) when viewed in the middleground of KOP #12b would be moderate because the project components would introduce elements not common in the landscape and would be visually prominent.</li> <li>• <b>Linear KOPs</b> – There would be unobstructed foreground views of the Proposed Action from KOP #11b. The project components would begin to visually dominate the landscape because of the strong contrast in terms of form and line that would be created by the BPS-3 (Alt.) facility. Within the middleground, the project components when viewed from KOP #11b would be visually subordinate to the existing elements and patterns in the characteristic landscape and would create a weak contrast in the setting.</li> <li>• <b>Other Linear Platforms</b> - The effect on the foreground views from the Old Spanish NHT within the VAU would be notable because of the moderate contrast in terms of form and line that would be created by the BPS-3 (Alt.) facility. Within the middleground, the proposed pipeline and BPS-3 (Alt.) when viewed from either the Old Spanish NHT or Highway 89 would be visually subordinate to the existing elements and patterns in the characteristic landscape and would create weak contrast in the setting.</li> </ul>	<p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• There would be no new substations located within the VAU.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Stationary KOPs</b> – The two proposed transmission lines would be in the middleground of the views from KOP #12b. The level of contrast that would be created when viewed from this stationary KOP would be negligible because the project components would be backdropped by landforms and not visually evident in the middleground views.</li> <li>• <b>Linear KOPs</b> – The Electric Transmission System Alternative would also be seen intermittently in the foreground and middleground from KOP #11b. The level of contrast that would be created by the transmission lines and structures when viewed from this linear KOP in the foreground would be subtle and in the middleground would be negligible because the components would be backdropped by landforms, would be intermittently visible, and would not be discernible in the middleground.</li> <li>• <b>Other Linear Platforms</b> - The BPS-3 (Alt.) Transmission Line would cross the Old Spanish NHT. The form and line of the proposed project would be consistent with the existing lines and form of the Garkane Glen Canyon to Buckskin Transmission Line. The effect to the views from this NHT and Highway 89 would be subtle in the foreground because it would result in a weak level of contrast in terms of scale, line, and form. Project components would also be seen intermittently in middleground views from the Old Spanish NHT and Highway 89. The project components would have a negligible effect on middleground views because it would not be visually evident.</li> </ul>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<p><b>5. Rimrocks/Paria River Valley</b></p>  <p>Proposed Action (South Alternative) Electric Transmission System (Glen Canyon to Buckskin Sub Transmission Line)</p> <p>This VAU includes the following stationary/linear KOP and linear platforms:</p> <ul style="list-style-type: none"> <li>• Stationary KOPs: #14 Toadstools Trailhead #15 Paria Contact Station</li> <li>• Linear KOPs: #13 Toadstool Trailhead from Highway 89</li> <li>• Other Linear Platforms: Old Spanish NHT Highway 89</li> </ul>	<p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• <b>Short-Term-</b>Ground-disturbing activities would remove a uniform band of low to medium height, irregular, stippled vegetation, expose lighter soils, and cut through the Paria River bed and the candy-striped Rimrock formations. In most areas, the lines and forms of the ground-disturbing activities would be consistent with the line and form of Highway 89 and would not attract attention. However, rock cuts in the Rimrocks area would create a notable degree of change because the landscape modification would not blend with the distinct rock stratifications and shapes.</li> <li>• Uniform removal of vegetation and exposure of lighter-colored soil for the proposed pipeline along with the approximately 30-acre staging area would also create a notable degree of change in the short term in the foreground because of the introduction of more distinct lines and form into the landscape. The project components would result in negligible change in the middleground of the VAU.</li> </ul> <p><b>Long-Term-</b>The line and form of the proposed water pipeline disturbance would be consistent with the line and form of the existing highway that it parallels. The pipeline alignment would pass over undulating terrain and through areas of exposed soils from various natural and cultural modifications. The disturbance area created by the uniform pipeline corridor would draw attention from the natural setting in this VAU, which would result in notable degree of change in the foreground. In the middleground, the project components would not be visually evident, creating a negligible change in the characteristic landscape.</p> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Stationary KOPs</b> – The proposed pipeline would be in the foreground of the views from KOP #14 and KOP #15. At KOP #14, the trailhead is at lower elevation point and there would be unobstructed and continuous views of the proposed project in the foreground as it traverses down an extended grade. The project components would attract attention because the moderate level of contrast in terms of line and form that would be created in the characteristic landscape when viewed from KOP #14. This alternative would not be visible in the middleground of KOP #14. KOP #15 would have long, continuous views of the proposed project. The project components would create a weak level of contrast when viewed from both the foreground and middleground from KOP #15 because the line and form of the proposed pipeline corridor would be visually subordinate in the setting.</li> <li>• <b>Linear KOPs</b> –There would be foreground views of the Proposed Action from KOP #13. When viewed in the foreground from this linear KOP, the project components would create a weak level of contrast because of the line and form of the proposed pipeline would be visually subordinate in the setting when viewed in the foreground from KOP #13. The project components would not be visually evident in the middleground views from KOP #13, creating a negligible degree of contrast in the characteristic landscape.</li> <li>• <b>Other Linear Platforms</b> - The proposed pipeline would cross the Old Spanish NHT near MP 21 on Highway 89 in Utah. Views of the Proposed Action from the trail on either side of where the proposed pipeline would cross would be viewed intermittently in this area. The effect on the foreground views from the Old Spanish NHT would be subtle because the form and line of the proposed project would be consistent with the existing lines and form to other features in the characteristic landscape. The project components would not be visually evident in the middleground views from the Old Spanish NHT and from Highway 89, creating a negligible degree of contrast in the characteristic landscape.</li> </ul>	<p>• There would be no new substations located within the VAU.</p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• <b>Short-Term-</b> The clearing of the vegetation for the structures would be a relatively small, circular clearing (approximately 36 inches in diameter for each pole) that would occur along the alignment at approximately every 750 feet. There would be no new access roads needed for construction. The Electric Transmission System would create a negligible change in the landscape character in the foreground and in the middleground because of the very small area that would be cleared of vegetation.</li> <li>• <b>Long-Term-</b>The existing lines, forms, and colors of the existing transmission lines and structures within this VAU would diminish the visual prominence of this power generating alternative. In the long-term, the Electric Transmission System Alternative would not attract attention from the natural setting because of the subtle change in the characteristic landscape that would be created in the foreground and middleground of the VAU.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Stationary and Linear KOPs</b> – The proposed transmission line would be in the middleground of the views from the two stationary KOPs and one linear KOP. The scale and spatial relationship of the proposed project and related components when viewed from any of these three KOPs would be a negligible change in the setting because the project components would be backdropped by landforms, the level of contrast in terms of line and form would be weak, and would not be discernible/visually evident within the middleground. The BPS-3 (Alt.) Transmission Line would also be intermittently visible in the middleground of the views from these three KOPs.</li> <li>• <b>Other Linear Platforms</b> - Proposed project features would also be seen intermittently from the middleground of the Old Spanish Trail NHT and Highway 89. The project components would not be visually evident due to the distance and presence of the prominent landforms as backdrops within the VAU.</li> </ul>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<p><b>6. Cockscomb</b></p> <p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <p></p> <p>Proposed Action (South Alternative)</p> <p>Electric Transmission System (Glen Canyon to Buckskin Sub Transmission Line)</p> <p>This VAU includes the following linear platforms:</p> <p>Highway 89</p>	<p><b>Direct Impacts from Pipeline (Foreground/Middleground)</b></p> <p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li><b>Short-Term/Long-term</b> - Ground-disturbing activities would remove a uniform band of mottled, low to medium height, irregularly spaced vegetation, expose lighter soils, and increase existing rock cut slopes alongside Highway 89. Although re-cutting the large rock cut slopes would result in greater landscape modification through the Cockscomb, the changes would be similar to the existing lines, forms, colors and textures of the characteristic landscape.</li> <li>The project would increase the perceived footprint of the highway corridor and result in a notable degree of change to the existing spatial enclosure from adjacent landforms because new cut slopes would be created that would lessen the degree of enclosure through the Cockscomb formation. These effects would draw attention from the natural setting in the short and long term, and would create a notable degree of change in the characteristic landscape in the foreground of the VAU. In the middleground, the project components would be intermittently visible because of the screening provided by the existing landforms. The potential effect in the middleground would not be visually evident.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li><b>Other Linear Platforms</b> - The proposed pipeline would be consistent with the lines and form of Highway 89, which the proposed project would parallel in this area. The effect on the foreground views from Highway 89 would be notable because the form and line of the proposed project would create a moderate level of contrast in the characteristic landscape. Middleground views along Highway 89 of the Proposed Action would be intermittent with a weak level of contrast.</li> </ul>	<p><b>Direct Impacts from Electric Transmission System (Foreground/Middleground)</b></p> <ul style="list-style-type: none"> <li>There would be no new substations located within the VAU.</li> </ul> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li><b>Short-Term</b> - The clearing of the vegetation for the structures would be a relatively small, circular clearing (approximately 36 inches in diameter for each pole) that would occur along the alignment at approximately every 750 feet. There would be no new access roads needed for construction. The Electric Transmission System Power Generating Alternative would create a negligible change in the landscape character in the foreground and in the middleground because of the very small area that would be cleared of vegetation.</li> <li><b>Long-Term</b> - The lines, forms, and colors of the existing transmission lines and structures within this VAU would diminish the visual prominence of this power generating alternative. The proposed transmission line would be skylined for a short distance as it would traverse across the top of the Cockscomb formation, but would be backdropped for the majority of the distance within this VAU. In the long-term, the Electric Transmission System Alternative would not attract attention from the natural setting because of the subtle change in the characteristic landscape that would be created in the foreground and middleground of the VAU.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li><b>Other Linear Platforms</b> - The project components would have a negligible effect on views because the alternative would not be visually evident in the middleground view from this linear platform with the presence of the prominent landforms as backdrops within the VAU.</li> </ul>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<p><b>7. Fivemile Valley</b></p>  <p>Proposed Action (South Alternative)</p> <p>BPS-4 (Alt)</p> <p>Electric Transmission System (Glen Canyon to Buckskin Sub Transmission Line, BPS-4 [Alt.] Transmission Line)</p> <p>This VAU includes the following linear KOP and other linear platforms:</p> <ul style="list-style-type: none"> <li>• Linear KOPs: #18 BPS-4(Alt.) from Highway 89</li> <li>• Other Linear Platforms: Old Spanish NHT Highway 89</li> </ul>	<p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• <b>Short-Term</b> - Ground-disturbing activities would remove a uniform band of low to medium height, randomly spaced vegetation, expose lighter soils, and cut through occasional washes. The proposed water pipeline would also pass over rolling landforms, elevating the ground disturbance in some locations within a semi-enclosed valley. Uniform removal of vegetation (juniper, in particular) and exposure of lighter-colored soil by the pipeline and the approximately 18-acre staging area and a portion of a 48-acre staging area would create a notable change in the setting in the short-term in the foreground because of the introduction of distinct line, form, and color contrast into the landscape. The project components would result in negligible change in the middleground of the VAU in the short-term.</li> <li>• <b>Long-Term</b> - The line and form of the proposed water pipeline would be consistent with the line and form of the existing highway it parallels through this VAU. The Proposed Action would include the BPS-4 (Alt.) facility on the east side of Highway 89, adjacent to the highway. There would be a subtle degree of change within the foreground of the VAU because the BPS-4 (Alt.) facility would be constructed between landforms with a backdrop of the Cockscomb Formation. The dispersed nature of the pinyon/juniper vegetation in this portion of the VAU would also help to reduce the visibility of the facility within the VAU. The project components would result in negligible change in the middleground of the VAU and would not be visually evident.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Linear KOPs</b> -There would be foreground views of the Proposed Action from KOP #18. The variety of land forms, dispersed vegetation of varying heights, color, and texture, and the backdrop of the Cockscombs Formation and Fivemile Mountains would help diminish the scale and contrast of the project components. The project components would attract attention in the characteristic landscape in the foreground because the contrast in form and line would create a moderate degree of contrast in the setting. When viewed from the middleground of KOP #18, the project components would be seen intermittently in the setting and would be visually subordinate.</li> <li>• <b>Other Linear Platforms</b> - Within the middleground, the proposed pipeline and BPS-4 (Alt.) when viewed from Highway 89 or the Old Spanish NHT would not be visually evident in the characteristic landscape because of the variability of the landforms and vegetation, which would help to screen the project components.</li> </ul>	<p>• There would be no new substations located within the VAU.</p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• <b>Short-Term</b>- The clearing of the vegetation for the structures would be a relatively small, circular clearing (approximately 36 inches in diameter for each pole) that would occur along the alignment at approximately every 750 feet. There would be no new access roads needed for construction. The Electric Transmission System Alternative would create a negligible change in the landscape character in the foreground and in the middleground because of the very small area that would be cleared of vegetation.</li> <li>• <b>Long-Term</b> -The 0.4-mile long 69 kV BPS-4 (Alt.) Transmission Line would not attract attention from the natural setting because the approximately would be buried. The existing lines, forms, and colors of the existing transmission lines and structures within this VAU would diminish the visual prominence of 230 kV Glen Canyon to Buckskin Sub Transmission Line. The proposed transmission line would be intermittently skylined and backdropped within this VAU. In the long-term, the Electric Transmission System Alternative would not attract attention from the natural setting because of the subtle change in the characteristic landscape that would be created in the foreground and middleground of the VAU.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Linear KOPs</b> -The 69 kV BPS-4 (Alt.) Transmission Line would not attract attention from the views from KOP #18 because this line would be buried. The 230 kV Glen Canyon to Buckskin Sub Transmission Line would have a negligible effect on views from KOP #18 because the alternative would not be visually evident in the middleground view because of the background provided by the existing landforms.</li> <li>• <b>Other Linear Platforms</b> - The 69 kV BPS-4 (Alt.) Transmission Line would not attract attention from the views from the Old Spanish NHT or Highway 89 because the 69 kV line would be buried. The 230 kV line would have a negligible effect on views from the Old Spanish NHT or Highway 89 because the 230 kV line would not be visually evident in the middleground view because of the prominent landforms as backdrops within the VAU.</li> </ul>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<p><b>8. Telegraph Flat</b></p>  <p>Proposed Action (South Alternative)</p> <p>HS-1</p> <p>High Point Regulating Tank -2</p> <p>Electric Transmission System (Glen Canyon to Buckskin Sub Transmission Line, HS-1 Transmission Line)</p> <p>This VAU includes the following stationary/linear KOP and linear platforms:</p> <ul style="list-style-type: none"> <li>• Stationary KOPs: #19 Road to Paria Interpretive Site</li> <li>#21 High Point Regulation Tanks from Great Western Trailhead</li> </ul> <p>Linear KOPs:</p> <ul style="list-style-type: none"> <li>#20 HS-1 from Highway 89</li> </ul> <p>Other Linear Platforms:</p> <ul style="list-style-type: none"> <li>Honeymoon HT</li> <li>Old Spanish NHT</li> <li>Highway 89</li> </ul>	<p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• <b>Short-Term-</b> Ground-disturbing activities associated with the water pipeline would remove a uniform band of low to medium height vegetation, expose lighter soils, and cut through occasional washes. The proposed water pipeline would also pass over rolling landforms, elevating views of the ground disturbance in some locations. Uniform removal of vegetation and exposure of lighter-colored soils along with the relatively large cleared and graded areas for the 48-acre staging area, HS-1 and High Point Regulating Tank -2 facilities would create subtle change in the foreground of the setting in the short-term because of the distinct line and color contrast into the landscape that would be created during construction. The project components would result in negligible change in the middleground of the VAU in the short-term.</li> <li>• <b>Long-Term-</b> The line and form of the proposed water pipeline would be consistent with the line and form of the existing highway that it would parallel through this VAU. There would be a notable degree of change within the foreground of the VAU because the HS-1 and High Point Regulating Tank -2 facilities would introduce elements and patterns not common in the characteristic landscape and attract attention. The scattered pinyon/juniper vegetation and adjacent landforms in this portion of the VAU would help to reduce the visibility of the facilities and would result in a subtle degree of change in the setting within the middleground of the VAU.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Stationary KOPs</b> – There would be unobstructed foreground views of the proposed waterline from KOP #19 as well as foreground views of the proposed waterline and High Point Regulating Tank-2 facilities from KOP #21. The proposed waterline pipeline would repeat the lines and form of the adjacent highway when viewed from KOP #19, which would result in a negligible change in the characteristic landscape in the long-term. When viewed in the foreground from KOP #21, the High Point Regulation Tank-2 facility would create low contrast in terms of line and form in the characteristic landscape because the security fencing would begin to attract attention. Within the middleground, the contrast of the proposed water pipeline, HS-1, and High Point Regulation Tank-2 when viewed from either KOP #19 or #21 would be negligible because the components would not be visually evident.</li> <li>• <b>Linear KOPs</b> - There would be foreground views of the proposed waterline and HS-1 facility from KOP #20. The effect on the views from this linear KOP would be substantial because the form and line of the proposed project components would have a strong level of contrast. Within the middleground, the level of contrast of the proposed water pipeline and High Point Regulation Tank-2 when viewed from either KOP #20 would be subtle because the components would not be visually evident.</li> <li>• <b>Other Linear Platforms</b> - The proposed pipeline would cross the Old Spanish NHT near MP 39.5 on Highway 89 in Utah. Foreground views of the HS-1 from the trail would be unobstructed and visually prominent in the landscape. The effect on the views from the portion of the Old Spanish NHT within the VAU would be substantial because the form and line of the proposed project components would have a strong level of contrast. The effects on the middleground views of Highway 89, the Honeymoon HT, or the Old Spanish NHT would be subtle because the project components would not be visually evident in the characteristic landscape.</li> </ul>	<p>• There would be no new substations located within the VAU.</p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• <b>Short-Term-</b> In this VAU, the approximately 400-foot long 69 kV HS-1 and 230 kV Glen Canyon to Buckskin Sub Transmission Lines would have the same lines, forms, and colors of the existing transmission lines and structures. The clearing of the vegetation for the structures would be a relatively small, circular clearing (approximately 36 inches in diameter for each pole) that would occur along the alignment at approximately every 750 feet. There would be no new access roads needed for construction. In the short-term, the Electric Transmission System would create a negligible change in the landscape character in the foreground and in the middleground because of the very small area that would be cleared of vegetation.</li> <li>• <b>Long-Term-</b> The construction of the HS-1 and the Glen Canyon to Buckskin Sub Transmission Lines would introduce visual elements that are common in the characteristic landscape. In the long-term, the Electric Transmission System would not attract attention from the natural setting because of the subtle change in the landscape that would be created by this alternative in the foreground. In the middleground of the VAU, the magnitude of change in the setting would be negligible and would not be visually evident.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Stationary KOPs</b> – Within the middleground, the Glen Canyon to Buckskin Sub Transmission Lines when viewed from KOP #19 would not be visible. HS-1 Transmission Line would be visible from KOP #21 in the middleground. The contrast that would be created by the 69 kV transmission line and structures when viewed from KOP #21 would be weak because this relatively short transmission line would be compatible with the other transmission structures and the scattered pinyon/juniper vegetation would help screen the proposed transmission line. KOP #21 would not be present in the foreground or middleground of 230 kV Glen Canyon to Buckskin Sub Transmission Line.</li> <li>• <b>Linear KOPs</b> – The HS-1 Transmission Line would be visible from KOP #20 in the foreground. The contrast that would be created by the 69 kV line when viewed from this linear KOP would be weak because the project components would be compatible with the other transmission structures and the vegetation would help reduce the visibility of the proposed structures. KOP #20 would not be present in the foreground or middleground of 230 kV Glen Canyon to Buckskin Sub Transmission Line.</li> <li>• <b>Other Linear Platforms</b> – The proposed 69 kV transmission line would be a subtle change in the foreground of the Old Spanish NHT and Highway 89 because of its relatively short span and the presence of an existing 69 kV line adjacent to the highway. In middleground views from the Old Spanish NHT, Honeymoon HT, and Highway 89 would be intermittent and the 69 kV line would not be visually evident. The Glen Canyon to Buckskin Sub Transmission Line would be viewed within the middleground from the Old Spanish NHT and the foreground and middleground of Highway 89. The visibility of the 230 kV lines would be intermittently skylined and seen against a backdrop of the existing landforms along with the existing transmission lines and structures. The proposed 230 kV transmission line would create a weak contrast in the foreground of the Highway 89 and a negligible contrast when viewed in the middleground from the Old Spanish NHT and Highway 89</li> </ul>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<b>9. Kanab/Vermilion Cliffs</b>  Proposed Action (South Alternative) Existing Highway Alternative Kane County Water Pipeline (including 24-inch pipeline along Johnson Canyon Road)  This VAU includes the following stationary/ linear KOP and other linear platforms: Stationary KOPs: #24 Highway 89 near Pioneer Gap #25 Kane County WTP Other Linear Platforms: Dominguez-Escalante HT Honeymoon HT Old Spanish NHT Highway 89	<p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li><b>Short-Term-</b>Ground-disturbing activities would remove a uniform band of dense sage-scrub and pinyon-juniper vegetation, expose lighter soils, and cut through occasional small washes. Clearing of sage-scrub vegetation for the Kane County Water Treatment Plant (KCWTP) would create large rectangular shapes in the landscape. Uniform removal of vegetation and exposure of lighter-colored soils would create a notable change in the setting in the short-term in the foreground because of the distinct line and color contrast into the landscape that would be created during construction and until vegetation restoration could occur. The project components would result in negligible changes in the middleground of the VAU in the short-term.</li> <li><b>Long-Term-</b>The line and form of the proposed water pipelines disturbance would be consistent with the line and form of the existing highway and Johnson Canyon Road, which the pipelines would closely parallel through this VAU. There would be a notable degree of change within the foreground of the VAU at the KCWTP because the project components would introduce elements and patterns not common in the characteristic landscape and would attract attention. The scattered pinyon/juniper vegetation and ranch buildings along with the backdrop of landforms would help to reduce the visibility of the facilities, which would result in a negligible change within the middleground of the VAU.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li><b>Stationary KOPs</b> –There would be unobstructed foreground views of the proposed waterlines from KOP #24 and from KOP #25. The proposed water pipelines would repeat the lines and form of the adjacent highway/road when viewed from these two stationary KOPs, which would result in a negligible level of contrast in the characteristic landscape in the long-term. When viewed in the foreground from KOP #25, KCWTP would create strong contrast in terms of line and form in the characteristic landscape. Within the middleground, the level of contrast of the Proposed Action and associated facilities when viewed from either KOP #24 or KOP #25 would be negligible because the components would not be visually evident.</li> <li><b>Other Linear Platforms</b> - The proposed water pipeline along Highway 89 would mostly parallel the highway, the Honeymoon HT, and the Old Spanish NHT. The effect on the foreground views from the portion of the trails within the VAU of the larger water pipeline would be low because the form and line of the proposed project components would create a weak contrast in the characteristic landscape. The effect on the middleground views from the portion of the Honeymoon HT, and the Old Spanish NHT within the VAU would be low because the form and line of the proposed project components (both proposed water pipelines and the KCWTP) would create a weak contrast in the characteristic landscape.</li> </ul> <p><b>Existing Highway Alternative</b></p> <ul style="list-style-type: none"> <li>The potential direct effects from the Existing Highway Alternative would be the same magnitude and duration as the Proposed Action. This alternative would also cross the Honeymoon HT three times near MP 58 on Highway 89, which is adjacent to rural development near Kanab. The proposed project would be consistent with the elements and patterns in the setting. The effect of the views from this HT in the short-and long-term would be subtle in the foreground because it would result in a weak level of contrast and the project components would not be discernible in the middleground views from Honeymoon HT. The Dominguez Escalante HT would not be present in the foreground. The potential effect on the views from this trail would be negligible because the water pipeline would not be visually evident in the middleground.</li> </ul>	<ul style="list-style-type: none"> <li>There would be no proposed transmission power generating alternative within this VAU for either the South or Existing Highway Pipeline Alternatives.</li> </ul>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<p><b>10. Whitesage Wash</b></p>  <p>Proposed Action (South Alternative)</p> <p>This VAU includes the following stationary/ linear KOP and other linear platforms:</p> <p>Stationary KOPs:</p> <ul style="list-style-type: none"> <li>#26 Shinarump Cliffs Overlook</li> <li>#27 Dominguez-Escalante and Honeymoon Crossing</li> </ul> <p>Other Linear Platforms:</p> <ul style="list-style-type: none"> <li>Honeymoon HT</li> <li>Dominguez-Escalante HT</li> <li>Fredonia–Vermilion Cliffs Scenic Road/ Highway 89A</li> </ul>	<p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• <b>Short-Term-</b>Ground-disturbing activities would remove a uniform band of dense sage-scrub and pinyon-juniper vegetation interspersed with large expanses of grasses, expose lighter soils, and cut through occasional washes. Uniform removal of vegetation and exposure of lighter-colored soil from the water pipeline and the approximately 34-acre staking area would create notable degree of change in the landscape in the short term in the foreground because of the introduction of distinct line and forms into the landscape. The project components would result in negligible change in the middleground of the VAU in the short-term.</li> <li>• <b>Long-Term-</b> This portion of the project would also include a permanent maintenance road over the pipeline, which would create a long-term effect. Although the road would introduce a new line in the landscape, the scale of the wide-open landscape, variety of dark soil color; and the height of the surrounding sage-scrub would diminish the degree of contrast with existing features. In addition, the Proposed Action would also parallel to the existing Navajo-McCullough 500 kV Transmission Line. The scale and vertical nature of the existing transmission lines and structures make them a notable feature in the landscape and would be more dominant than the ground disturbance associated with the project components. The new road and water pipeline would create a subtle change in the characteristic landscape and would not attract attention in the long-term in the foreground or middleground of the VAU.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Stationary KOP-</b> The proposed project components would be visible in the middleground from KOP #26 and would create a weak level of contrast in the characteristic landscape. The project components would not attract attention from the views from KOP #26 due to its distance from this stationary platform, the variability of the terrain and soil color and the presence of linear paths/unpaved roads. The project would also cross the KOP #27 at an acute angle and would create a moderate level of contrast in the foreground. In the middleground, the effect on the views from KOP #27 would be a negligible because the water pipeline would not be visually evident.</li> <li>• <b>Other Linear Platforms –</b> The Proposed Action would cross the Honeymoon and the Dominguez-Escalante HT in addition to the Fredonia–Vermilion Cliffs Scenic Road/US 89A linear platforms. The Navajo-McCullough 500 kV Transmission Line crosses the scenic road within 500 feet of the Proposed Action and is a prominent feature in the landscape and attracts attention in the foreground distance zone from the scenic road. The proposed pipeline would cross the scenic road at a right angle and would result in a weak level of contrast in the landscape in the foreground. The Dominguez-Escalante HT would parallel the proposed water pipeline for several miles and would create a negligible level of contrast in the landscape setting of the trail in the middleground because it would not be visually evident.</li> </ul>	<ul style="list-style-type: none"> <li>• There would be no proposed transmission power generating alternative within this VAU.</li> </ul>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<b>11. Kanab/Fredonia/ Lost Springs Wash</b>  Existing Highway Alternative  This VAU includes the following other linear platforms:  Other Linear Platforms: Dominguez-Escalante HT Old Spanish Trail NHT Fredonia–Vermilion Cliffs Scenic Road/ Highway 89A	<p><b>Existing Highway Water Pipeline Alternative</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>Short –Term/Long-Term-Ground-disturbing activities would remove a uniform band of low to medium height vegetation through this relatively flat terrain with patchy vegetation, expose lighter soils, and cut through occasional washes. Within this VAU there are scattered cultural modifications including transmission lines and structures, recreational trails, unpaved roads, and buildings associated with the fringe development associated with the communities of Fredonia and Kanab. Potential effects from the proposed water pipeline would introduce visually subordinate elements that are common and would create a subtle change in the characteristic landscape in the short and long term in the foreground of the VAU. In the middleground, the Existing Highway Alternative would not be visually evident and would result in a negligible magnitude of change in the characteristic landscape in the short-and long-term.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li><b>Other Linear Platforms</b> – In the middleground view from the Fredonia–Vermilion Cliffs Scenic Road/ Highway 89A, the Existing Highway Alternative would create a negligible level of contrast and would not be discernible because it would not be visually evident. The project components would cross Highway 89A just north of the town of Fredonia and the Old Spanish NHT just west of the town. The crossing of the highway and the trail would result in a subtle level of contrast in the views from these linear platforms due to the existing cultural modifications in the surrounding area in the foreground. The Existing Highway Alternative would not be visually evident and would not be discernible in the characteristic landscape from that distance. The Dominguez-Escalante HT would not be present in the foreground of this alternative. This HT would be present in the middleground of the Existing Highway Alternative; however the proposed waterline would not be visible in the setting.</li> </ul>	<ul style="list-style-type: none"> <li>There would be no proposed electric transmission system power generating alternative within this VAU.</li> </ul>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<b>12. Jacob Canyon/Kanab Creek/ Pipe Valley</b>  Proposed Action (South Alternative) Southeast Corner Alternative  This VAU includes the following stationary/ linear KOP and other linear platforms:  Stationary KOPs: #28 Kanab Creek (Kanab Creek ACEC) #29 Bitter Seeps Wash (Kanab Creek ACEC) #30 Mount Trumbull Road  Other Linear Platforms: Dominguez-Escalante HT Honeymoon HT County Road 239 Mt. Trumbull Road	<p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• <b>Short-Term/Long-Term</b>-Ground-disturbing activities would remove a uniform band of predominately grasses interspersed with pinyon and juniper vegetation low to medium in height and density, expose lighter soils, and cut through several deeply incised wash formations. The Proposed Action would also remove approximately 66 total acres of vegetation for the three staging areas within the VAU. The existing 500 kV Navajo McCullough transmission line is a dominating features that attract attention within the VAU.</li> <li>• The Proposed Action would draw attention from the natural setting in the short- and long-term and would create a notable degree of change in the characteristic landscape in the foreground because of the introduction of distinct lines into the landscape in the VAU. In the middleground, the Proposed Action would create a negligible change in setting in the short-and long-term.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Stationary KOPs</b> – The existing 500 kV transmission line would be present within the foreground views of all three stationary KOPs. The project components would create moderate contrast within the foreground views of both KOP #28 and KOP #29 as the pipeline would cross the incised drainages of Kanab Creek and Bitter Seeps Wash. These effects would draw attention from the natural setting and result in a moderate level of contrast. The level of contrast within the foreground of KOP #30 would be weak because the water pipeline would be a subtle change in the characteristic landscape. In the middleground, the effect on the views from the three stationary KOPs would negligible because the water pipeline would not be visually evident.</li> <li>• <b>Other Linear Platforms</b> – The water pipeline would intersect the Dominguez-Escalante HT at an angle. The 500 kV transmission line are also present within the foreground views of this HT. The foreground view of the Proposed Action from the Dominguez-Escalante HT would create a weak level of contrast and would be visually subordinate because the lines and form of the project would be consistent with those of the existing transmission-line access road. In addition, Mt. Trumbull Road would be widened and improved as an access road for the project. The characteristics of the improved road would be generally consistent with the line and form of the existing road. The degree of contrast when viewed in the foreground and middleground from the Mt. Trumbull Road would be negligible and would not attract attention. The potential effect to the foreground views from the Honeymoon HT would be subtle and would also be visually subordinate since the lines and form of the project would be similar to County Road 239, which the Proposed Action would parallel in this location. In the middleground, the views from the two HTs and County Road 239 of this alternative would not be visually evident in the characteristic landscape.</li> </ul> <p><b>Southeast Corner Alternative</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• <b>Short-Term/Long-Term</b>-Ground-disturbing activities would remove a uniform vegetation low to medium in height and density, expose lighter soils, and cut through several deeply incised washes. The existing 500 kV transmission line is a dominating feature that attracts attention within the VAU. The potential effects from the Southeast Corner Alternative would draw attention from the natural setting in the short and long term and would create a notable degree of change in the characteristic landscape because of the introduction of distinct lines into the landscape in the foreground in the VAU. In the middleground, this alternative would result in a negligible magnitude of change in the characteristic landscape in the short-and long-term because the project components would not be visually evident in the setting.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• There are no sensitive viewing platforms in this VAU.</li> </ul>	<p>There would be no proposed transmission power generating alternative within this VAU associated with the Proposed Action and Southeast Corner Alternative.</p>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<p><b>13. Shinarump Cliffs</b></p>  <p>Existing Highway Alternative</p> <p>This VAU includes the following stationary/ linear KOP and other linear platforms:</p> <ul style="list-style-type: none"> <li>• Stationary KOPs:           <ul style="list-style-type: none"> <li>#31 Kanab Paiute Tribal Headquarters</li> </ul> </li> <li>• Other Linear Platforms:           <ul style="list-style-type: none"> <li>Dominguez-Escalante HT</li> <li>Honeymoon HT</li> <li>Old Spanish NHT</li> <li>Highway 389</li> </ul> </li> </ul>	<p><b>Existing Highway Alternative</b></p> <p><b>Change in Landscape Character</b></p> <p><b>Short-Term/Long-Term</b>-Ground-disturbing activities would remove a uniform band of dense to patchy, low to medium height vegetation, expose lighter soils, and cut through a number of low rock formations in this rolling terrain. The line and form of the majority of the pipeline disturbance would be consistent with the line and form of the Highway 389, which it would closely parallel through the majority of this VAU. The change in the characteristic landscape in the foreground and middleground of the VAU would be visually subordinate in the natural setting in the short or long term and would create a subtle change.</p> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Stationary KOPs</b> –The project components would create weak contrast within the foreground views of KOP #31 and would be consistent with the line and form of the existing highway that it would parallel. The water pipeline would be adjacent to the parking area of the Kanab Paiute Tribal Headquarters and there would be unobstructed views of the project components. The effect on views from this KOP would be a subtle change in the characteristic landscape because the Existing Highway Pipeline Alternative would be visually subordinate in the landscape. In the middleground, the effect on the views from this stationary KOP would be negligible because the water pipeline would not be visually evident.</li> <li>• <b>Other Linear Platforms</b> – The proposed project alignments, at varying distances, would parallel the Honeymoon HT, the Old Spanish NHT, and Highway 389. Views from Highway 389 would be unobstructed in areas where the terrain is sloping. The water pipeline would cross the Old Spanish NHT near MP 28.5 at an angle. This alternative would also closely parallel portions of the Old Spanish NHT and the Honeymoon HT since the trails align with Highway 389 in places. The Existing Highway Pipeline Alternative would create a subtle change and would be visually subordinate in the foreground and undiscernible in the middleground views from the Old Spanish NHT, Honeymoon HT, and Highway 389 because the lines and form of the project would be consistent with those of the existing highway. The Dominguez Escalante HT would not be present in the foreground. The potential effect on the views from this trail would be negligible because the water pipeline would not be visually evident in the middleground.</li> </ul>	<p>There would be no proposed transmission power generating alternative within this VAU associated with the Existing Highway Pipeline Alternative.</p>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<b>14. Potter Canyon</b>  Existing Highway Alternative  This VAU includes the following stationary/linear KOP and linear platforms:  Other Linear Platforms: Honeymoon HT Old Spanish NHT Highway 389	<p><b>Existing Highway Alternative</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• <b>Short-Term/Long-Term</b>-Ground-disturbing activities would remove a uniform band of dense to patchy vegetation, expose lighter soils, and cut through a number of washes and low landforms in this rolling terrain. The line and form of the majority of the pipeline disturbance would be consistent with the line and form of the existing highway it would closely parallel through most of this VAU. The potential effects in the foreground and middleground of the VAU would be visually subordinate in the natural setting in the short or long term and would create a subtle change in the characteristic landscape.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Other Linear Platforms</b> – The proposed project alignments, at varying distances, would parallel the Honeymoon HT, the Old Spanish NHT, and Highway 389. The water pipeline would cross the Honeymoon NHT near MP 15 at an angle. This alternative would also parallel portions of the Old Spanish NHT and Honeymoon HT. Foreground views from Highway 389 and those segments of the trails in close proximity to the water pipeline alignment would be unobstructed in areas where the terrain is sloping. The Existing Highway Alternative would create a subtle change and would be visually subordinate in the foreground views from the Old Spanish NHT, Honeymoon HT, and Highway 389 because the lines and form of the project would be consistent with those of the existing highway and other linear features in the setting. In the middleground, the views from the two HTs and Highway 389 of this alternative would not be visually evident.</li> </ul>	<p>There would be no proposed transmission power generating alternative within this VAU associated with the Existing Highway Alternative.</p>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<b>15. Cottonwood Wash</b>  <p>Proposed Action (South Alternative) HS-2 South Existing Highway Alternative HS-2 Hwy Electric Transmission System (HS-2 [South] Transmission Line, HS-2 [Hwy] Transmission Line)</p> <p>This VAU includes the following stationary/linear KOP and linear platforms: Linear KOPs: #32 HS-2 Hwy from Highway 389 (Existing Highway Pipeline Alternative) #33 HS-2 South from County Road 239 (South Pipeline Alternative) Other Linear Platforms: Old Spanish NHT Highway 389 Honeymoon HT County Road 239</p>	<p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li><b>Short-Term</b>-Ground-disturbing activities would remove a uniform band of low to medium height vegetation, expose lighter soils, and cut through occasional washes and low landforms. The proposed water pipeline would also pass over rolling landforms, elevating views of the ground disturbance in some locations. The Proposed Action would also remove approximately 40 total acres of vegetation for the two staging areas within the VAU. Uniform removal of vegetation and exposure of lighter-colored soils along with the relatively large cleared and graded areas for the HS-2 South facilities and the staging areas would create a notable change in the short term because the removal of vegetation would attract attention in the foreground of the VAU. The change in the characteristic landscape in the middleground of the VAU would be visually subordinate in the natural setting in the short term and would create a subtle change.</li> <li><b>Long-Term</b>-The line and form of the proposed water pipeline would be consistent with the line and form of the existing highway that it would parallel through this VAU. There would be a high degree of change within the foreground of the VAU because the project components would introduce elements and patterns not common in the characteristic landscape and attract attention. There are few other cultural modifications in this area. The scattered pinyon/juniper vegetation and adjacent landforms in this portion of the VAU would help to reduce the scale of the HS-2 South facilities and would result in a low degree of change within the middleground setting of the VAU.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li><b>Linear KOPs</b> - The effect on the foreground views from KOP #32 and KOP #33 would be substantial because the form, texture, and line of the proposed project components would have a strong level of contrast. The hydro facility would begin to dominate this landscape within the foreground view of these linear KOPs. Within the middleground, the level of contrast that would be created by the proposed water pipeline and HS-2 South when viewed from either KOP #32 or KOP#33 would be weak because the components would be visually subordinate in the characteristic landscape because of the adjacent landforms.</li> <li><b>Other Linear Platforms</b>-The proposed pipeline would cross the Old Spanish NHT south of Highway 389 near MP 8 in Arizona. Foreground views of the HS-2 South facility from the trail and County Road 239 would be unobstructed and visually prominent in the landscape. Views from Highway 389 and County Road 239 would be unobstructed in areas where the terrain is sloping. The effect on the views from the portion of the Old Spanish NHT within the VAU and the two highways would be substantial because the form and line of the proposed project components would have a strong level of contrast. The effects from the Proposed Action on the middleground views of Highway 389, County Road 239, or the Old Spanish NHT would be subtle because the scale and level of contrast created by the project components would be a subtle change in the characteristic landscape.</li> </ul> <p><b>Existing Highway Pipeline Alternative</b></p> <ul style="list-style-type: none"> <li>For the Existing Highway Alternative, HS-2 Hwy facility would be located on the north side of Highway 389 at approximately MP 9.5. The potential effects in the VAU and from views from KOP #32, the Old Spanish NHT, and Highway 389 (as noted for County Road 239) from the proposed water pipeline and HS-2 Hwy facility would be the same as the effects described in the Proposed Action for the pipeline and HS-2 South.</li> </ul>	<p><b>Proposed Action</b></p> <ul style="list-style-type: none"> <li>There would be no new substations located within the VAU.</li> </ul> <p><b>Change in Landscape Character</b></p> <p><b>Short-Term/Long-Term</b> - In this VAU, the HS-2 South Transmission Line would have the same lines, forms, and colors of the existing 138 kV transmission lines and structures. The clearing of the vegetation for the structures would be a relatively small, circular clearing (approximately 36 inches in diameter for each pole) that would occur along the alignment at approximately every 750 feet. The construction and operation of the approximately 0.9 mile long 34.5 kV transmission line would introduce visual elements that are common in the characteristic landscape. In the short-and long-term, the Electric Transmission System Alternative would not attract attention from the natural setting because of the subtle change that would be created by this relatively short segment of transmission line in the foreground and a change not visually evident in the setting in the middleground of the VAU.</p> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li><b>Linear KOPs</b> – The HS-2 South Transmission Line would be visible from KOP #33 in the foreground and middleground. The level of contrast that would be created by the 34.5 kV transmission line and structures when viewed from this linear KOP in the foreground would be weak because it would introduce lines and forms common to the setting and negligible in the middleground because it would not be visual evident.</li> <li><b>Other Linear Platforms</b> – The presence of the existing highway, unpaved roads, and transmission line in the setting are elements and patterns common in the setting that help reduce the effects of the short segment of 34.5 kV line. The proposed transmission line would cross over the Old Spanish NHT and would create a subtle change in the setting and a weak level of contrast in the foreground of the NHT. In foreground, views from County 239, and Highway 389 would be unobstructed and the project components would result in a weak level of contrast that would be visual subordinate in the setting. In middleground, views from the Old Spanish NHT, Honeymoon HT, County 239, and Highway 389 would be intermittent and the project components would not be visually evident, which results in a negligible level of contrast. The Honeymoon Trail would not be present in the foreground distance zone of this alternative.</li> </ul> <p><b>Existing Highway Pipeline Alternative</b></p> <p><b>Change in Landscape Character</b></p> <p><b>Short-Term/Long-Term</b> - In this VAU, the HS-2 Hwy Transmission Line would have the same lines, forms, and colors of the existing 138 kV transmission lines and structures. The clearing of the vegetation for the structures would be a relatively small, circular clearing (approximately 36 inches in diameter for each pole) that would occur along the alignment at approximately every 750 feet. The construction and operation of the approximately 0.6 mile long 34.5 kV transmission line would introduce visual elements that are common in the characteristic landscape. In the short-and long-term, the Electric Transmission System Alternative would not attract attention from the natural setting because of the subtle change that would be created by this relatively short segment of transmission line in the foreground and a change not visually evident in the setting in the middleground of the VAU.</p> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li><b>Linear KOPs</b> – The HS-2 Hwy Transmission Line would be visible from KOP #33 in the foreground and middleground. The level of contrast that would be created by the 34.5 kV transmission line and structures when viewed from this linear KOP in the foreground would be weak because it would introduce lines and forms common to the setting and negligible in the middleground because it would not be visual evident.</li> <li><b>Other Linear Platforms</b> – The presence of the existing highway, unpaved roads, and transmission line in the setting are elements and patterns common in the setting that help reduce the effects of the short segment of 34.5 kV line. The proposed transmission line would cross over the Old Spanish NHT and would create a subtle change in the setting and a weak level of contrast in the foreground of the NHT. In foreground, views from County 239, and Highway 389 would be unobstructed and the project components would result in a weak level of contrast that would be visual subordinate in the setting. In middleground, views from the Old Spanish NHT, Honeymoon HT, County 239, and Highway 389 would be intermittent and the project components would not be visually evident, which results in a negligible level of contrast. The Honeymoon Trail would not be present in the foreground distance zone of this alternative.</li> </ul>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<b>16. Colorado City/Hildale</b>  Proposed Action (South Alternative) HS-3 Electric Transmission System (HS-3 Underground Transmission Line)  This VAU includes the following stationary/linear KOP and linear platforms:  Stationary KOPs: #34 HS-3 Hwy from Uzona Avenue Other Linear Platforms: Old Spanish NHT Highway 389	<p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li><b>Short-Term/Long-Term</b>-Ground-disturbing activities would remove a uniform band of sage-scrub and pinyon/juniper vegetation, expose lighter soils, and cut through occasional washes and low landforms. The Proposed Action would also remove approximately 57 total acres of vegetation for the two staging areas within the relatively flat to slightly rolling terrain of this VAU. The lines and forms of the project component would be consistent with the lines and forms of other cultural modifications in the existing landscape associated with the communities of Colorado City and Hildale. The removal of vegetation and the presence of the HS-3 facility would create a subtle change in the setting in the short and long term because the project components would repeat form, line, texture and scale common in the characteristic landscape in the foreground of the VAU. The project components would result in negligible change in the middleground in the short-term.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li><b>Stationary KOP</b> - The project components would introduce new horizontal lines and rectangular forms into the landscape, which would be similar to the lines and forms already present in cultural modifications. This alternative would create a weak level of contrast in the foreground views from KOP #34 and it would result in no apparent change to the characteristic landscape in the middleground views from this stationary KOP.</li> <li><b>Other Linear Platforms</b> - The Proposed Action would parallel Highway 389 for several miles before crossing the highway and heading west. The project components would be readily visible from this linear platform, but would be consistent with the features of the existing landscape and would result in a weak level of contrast in the foreground view from Highway 389. When viewed in the middleground from the Old Spanish NHT and Highway 389, the project components would not be visually evident.</li> </ul>	<p>• There would be no new substations located within the VAU.</p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li><b>Short-Term</b>-In this VAU, the HS-3 Underground Transmission Line would be buried for approximately 0.6 miles and would create a uniform band of disturbance from the removal of vegetation during construction. The construction of the approximately 0.6 mile long 12.47 kV transmission line would introduce visual elements that are common in the setting in an area of rural development including paved roads, overhead transmission lines, and various forms of buildings.</li> <li><b>Long-Term</b>-The Electric Transmission System Alternative would not attract attention in the foreground or in the middleground of the VAU because the 12.47 kV line would be buried.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li><b>Stationary KOPs</b> – The Electric Transmission System Alternative would not attract attention in the foreground or in the middleground of KOP #34 because the 12.47 kV line would be buried.</li> <li><b>Other Linear Platforms</b> – The Electric Transmission System Alternative would not attract attention in the foreground or in the middleground of the Old Spanish NHT and Highway 389 because the 12.47 kV line would be buried.</li> </ul>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<b>17. Uzona-Canaan Wash</b>  Proposed Action (South Alternative)  This VAU includes the following stationary/linear KOP and linear platforms: Stationary KOPs: #35 Uzona Avenue/Canaan Wash Other Linear Platforms: Old Spanish NHT	<p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li><b>Short-term</b> -Ground-disturbing activities would remove a uniform band of irregularly spaced sage-scrub and pinyon/juniper vegetation and cut through occasional rock formations and washes. Uniform removal of vegetation and landform modification for the water pipeline would attract attention in the foreground of the VAU in the short-term. This alternative would create a notable change in the foreground because of the introduction of new distinct, uniform lines and rectangles in the landscape that would be visually prominent. The Proposed Action would create a subtle change in the middleground because the project components would be visually subordinate from viewed from this distance.</li> <li><b>Long –term</b>- The forms and lines of the proposed alignment would be consistent with forms and lines already present in the VAU. The pipeline alignment would pass over rolling landforms. The disturbance area created by the uniform pipeline corridor would be more visually prominent in the foreground and would draw attention from the natural setting, which would result in a notable change in the landscape character. In the middleground, the project components would not be visually evident, creating a negligible degree of change in the characteristic landscape.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li><b>Stationary KOP</b> – Views from KOP #35 are limited by the adjacent landforms. The project components would be prominent features in the landscape, even though they would be similar to the lines and forms of the existing dirt road that the water pipeline would parallel, because of the spatial enclosure. This alternative would create a moderate level of contrast in the foreground views from KOP #34. Middleground views from this stationary KOP would be limited and for the most part by obstructed by landforms and evergreen vegetation. The water pipeline would result in no apparent change to the characteristic landscape in the middleground views from this stationary KOP and would be visually subordinate in the setting.</li> <li><b>Other Linear Platforms</b> –The project components would not be visible for the majority of the Old Spanish NHT within this VAU. When viewed in the middleground from the Old Spanish NHT, the project components would not be discernible in the setting because of the distance form this linear platform and the varied landforms and evergreen vegetation present.</li> </ul>	<p>There would be no proposed transmission power generating alternative within this VAU associated with the Proposed Action.</p>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<p><b>18. Short Creek</b></p>  <p>Proposed Action (South Alternative)</p> <p>This VAU includes the following stationary/linear KOPs and linear platforms:</p> <p>Stationary KOPs:</p> <ul style="list-style-type: none"> <li>#36 Canaan Gap</li> </ul> <p>Other Linear Platforms:</p> <ul style="list-style-type: none"> <li>Old Spanish NHT</li> </ul>	<p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li>• Short-Term/Long-Term-Ground-disturbing activities would remove a uniform band of low to medium height, patchy vegetation, cut through Short Creek, and expose lighter soils. The lines and forms of the project component including a 22-acre staging area would be consistent with the lines, texture, and forms of existing unpaved roads and other existing areas of disturbance in this relatively flat terrain. No apparent change in the setting in the short-and long-term would occur because the project components would repeat form and line elements that are common in the characteristic landscape in the foreground and middleground of the VAU.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li>• <b>Stationary KOP</b> - The project components would introduce additional horizontal lines into the setting, which would be similar to the lines and forms already present in the setting. The level of contrast in the foreground and middleground views from KOP #36 would be negligible and would result in no apparent change to the characteristic landscape.</li> <li>• <b>Other Linear Platforms</b> – The Proposed Action would parallel the Old Spanish NHT for several miles before crossing the trail twice at an angle. The project components would be readily visible from this linear platform, but would be consistent with the features of the existing landscape and would result in a negligible level of contrast to the landscape character in the foreground and middleground views.</li> </ul>	<p>There would be no proposed transmission power generating alternative within this VAU associated with the Proposed Action.</p>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<b>19. Frog Hollow</b>  Proposed Action (South Alternative) HS-4 (Alt) Hurricane Cliffs Forebay Reservoir Electric Transmission System (HS-4[Alt]Transmission Line) Point of Interconnection Substation  This VAU includes the following stationary/linear KOPs and linear platforms: Stationary KOPs: #37 Little Creek Overlook #38 HS-4 (Alt.) from Frog Hollow Road  Other Linear Platforms: Honeymoon HT Old Spanish NHT	<p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li><b>Short-Term-</b> Ground-disturbing activities would remove a uniform band of dense, evenly spaced low to medium height vegetation, expose lighter soils, and cut through several washes and rock formations. The lines and forms of the project components including a 21-acre staging area would be visually prominent in the foreground. The pipeline alignment for this option would traverse mostly undisturbed land until reaching Frog Hollow Road, at which point it would parallel the road northward to Highway 59. In the foreground, the project components would draw attention from the characteristic landscape in the short-term and would create notable change in the setting. In this rolling terrain, the water pipeline may be intermittently visible in the middleground as the uniform line and exposed light colored soils would be exposed on the sloped portions of landforms that are scattered throughout the landscape. This would result in a subtle change in the characteristics landscape in the middleground in the short-term.</li> <li><b>Long-Term-</b> HS-4 (Alt) would be located along Frog Hollow Road and the facility's presence would create a substantial degree of change to the landscape by introducing an industrial facility into a remote rural area. The vertical lines and rectangular forms of the HS-4 (Alt) would begin to dominate the landscape in the foreground. The large Hurricane Cliffs Forebay Reservoir would also be within this VAU. The degree of change within the foreground of the reservoir would be high and would begin to dominate the view. This forebay would cover an area of approximately 634 acres, 7,500 feet long and 2,500 feet wide. In the middleground, the project components would be visually evident, creating a subtle degree of change in the characteristic landscape.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li><b>Stationary KOPs</b> – Middleground views of the project components from KOP #37 would be unobstructed. The level of contrast in the characteristic landscape would be high due to the contrast in line, form, and texture created by the proposed forebay reservoir. The proposed forebay reservoir would begin to dominate the view from this KOP even in the expansive scale of the landscape from high atop Little Creek Mountain.</li> </ul> <p>There would be unobstructed foreground views of the proposed waterline and HS-4(Alt) facilities from KOP #38. The proposed waterline pipeline would result in a negligible change in the characteristic landscape in the long-term. When viewed in the foreground from KOP #38, the HS-4(Alt) facility would create strong contrast in terms of line and form in the characteristic landscape because the facility would be visually incompatible in the setting. Within the middleground, the contrast of the proposed water pipeline and HS-4 (Alt) when viewed from KOP #38 would be negligible because the components would not be visually evident.</p> <ul style="list-style-type: none"> <li><b>Other Linear Platforms</b> - The Honeymoon HT and Old Spanish NHT are also present in this VAU. From the middleground views of these linear platforms, the lines and forms introduced by the project would not be visually evident.</li> </ul>	<p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <p><b>Short-Term</b> - In this VAU, the clearing of vegetation for the HS-4 (Alt) South Transmission Line structures would be a relatively small, circular clearing (approximately 36 inches in diameter for each pole) that would occur along the alignment at approximately every 750 feet. The Point of Interconnection Substation would clear approximately 0.2-acre and the three staging areas would clear 26 acres. The construction of the approximately 8 mile-long 69 kV transmission line and clearing for the proposed substation and stages areas would introduce visual elements that are common in the characteristic landscape. The Electric Transmission System Alternative would not attract attention from the setting because of the subtle change that would be created by this alternative in the foreground. Within the middleground, the contrast of transmission line and structures would be negligible because the components would not be visually evident.</p> <p><b>Long-Term</b> – Within the foreground of the VAU, there are no other existing transmission lines or substation. The elements created by the HS-4 (Alt.) South Transmission Line would attract attention, be visually prominent, and would create a notable change in the foreground of the setting. Within the middleground, this electric power generating alternative would not attract attention and would be negligible because the components would not be visually evident.</p> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li><b>Stationary KOPs</b> – HS-4 (Alt.) South Transmission Line would not be present within the foreground of KOP #37. Middleground views of the project components from KOP #37 would be unobstructed. The level of contrast in the characteristic landscape would be negligible from this platform on Little Creek Mountain. The proposed substation would not be visible from KOP #37.</li> </ul> <p>When viewed in the foreground from KOP #38, the HS-4 (Alt.) South Transmission Line would attract attention, create moderate contrast in terms of line and form, and be visually prominent in the foreground of the setting. Within the middleground, the contrast of transmission line and structures when viewed from KOP #38 would be negligible because the components would not be visually evident.</p> <p><b>Other Linear Platforms</b> -. The HS-4 (Alt.) South Transmission Line would not be present within the foreground of the Honeymoon HT or the Old Spanish NHT. From the middleground views of Honeymoon HT and Old Spanish NHT, the lines and forms introduced by the project would not be visually evident.</p>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<b>20. Hurricane Cliffs Road</b>  Proposed Action (South Alternative) Hurricane Cliffs Hydro Station Hurricane Cliffs Afterbay Reservoir Electric Transmission System (Hurricane Cliffs Hydro Station to Hurricane West Transmission Line)  This VAU includes the following stationary/linear KOPs and linear platforms: Stationary KOPs: #39 Hurricane Cliffs Road – View to South  #40 Hurricane Cliffs Road – Unnamed OHV Road  Other Linear Platforms: Old Spanish NHT Dominquez-Escalante HT Honeymoon HT	<p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li><b>Short-Term</b>- The pipeline alignment associated with the Proposed Action would be tunneled through the landform to the west of the proposed afterbay. The alignment would therefore have no visible ground disturbance. Ground-disturbing activities would remove a uniform area of low, randomly spaced vegetation, expose lighter soils, and cut through several washes and rock formations. The lines and forms of the project components including a 12-acre staging area and the Hurricane Cliffs Hydro Station would be visually prominent in the foreground. This alternative would draw attention in the setting and would create a notable change in the characteristic landscape in the short-term. The Proposed Action would create a subtle change in the middleground because the project components would be visually subordinate from viewed from this distance.</li> <li><b>Long-Term</b>- The vertical lines and rectangular forms of the project components would dominate the landscape in the foreground. The afterbay would cover approximately 200 acres and the hydro station would encompass 50 acres. The degree of change in the setting within the foreground of the VAU would be severe because the project components would dominate the setting. In the middleground, the project components would attract attention, creating a notable degree of change in the characteristic landscape.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li><b>Stationary KOPs</b> – There would be unobstructed foreground views of the Proposed Action facilities from KOP #39 and KOP #40. When viewed in the foreground from KOP #39, the hydro station and afterbay reservoir would create very strong contrast in terms of line, scale, and form in the characteristic landscape and the facility would be visually highly incompatible in the setting. When viewed in the foreground from KOP #40, the hydro station and afterbay reservoir would create strong contrast in terms of line, scale, and form in the characteristic landscape because the facility would be visually incompatible in the setting. Within the middleground, the contrast of the project components when viewed from either stationary platform would be subtle because the components would create weak contrast and be generally compatible when viewed from this distance.</li> <li><b>Other Linear Platforms</b> - The Dominquez-Escalante HT, Honeymoon HT, and the Old Spanish NHT are also present in this VAU. From the middleground views of the trail, the lines and forms introduced by the project components would not be visually evident.</li> </ul>	<p><b>Proposed Action</b></p> <ul style="list-style-type: none"> <li>There would be no new substations located within the VAU.</li> </ul> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li><b>Short-Term</b> - In this VAU, the clearing of vegetation for the 345 kV Hurricane Cliffs Hydro Station to Hurricane West Transmission Line structures would be a relatively small, circular clearing (approximately 36 inches in diameter for each pole) that would occur along the alignment at approximately every 750 feet. The Electric Transmission System Alternative would not attract attention from the setting because of the negligible change that would be created during construction by this alternative in the foreground.</li> <li><b>Long-Term</b> – Within the foreground of the VAU, there are no other existing transmission lines. Portions of the proposed transmission lines would be skylined with no landform backdrop to help reduce the potential visual effects. The elements created by the Hurricane Cliffs Hydro Station to Hurricane West Transmission Line would attract attention and would create a notable change in the foreground of the setting. Within the middleground, this 10.9 mile long electric power generating alternative would not attract attention, would create a subtle change in the landscape, and would be visually subordinate in the setting.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li><b>Stationary KOPs</b> – When viewed in the foreground from KOP #39, the Hurricane Cliffs Hydro Station to Hurricane West Transmission Line would create strong contrast in terms of line and form and begin to dominate in the foreground views from the platform. Within the middleground from KOP #39, the contrast of transmission line and structures would be subtle because the components would be visually subordinate in the setting. This transmission line would not be present in the foreground of KOP #40. The contrast created by the project components when viewed in the middleground from KOP #40 would be moderate because of the line and form would attract attention and there would unobstructed views of the .</li> <li><b>Other Linear Platforms</b> -. This transmission line would not be present in the foreground of the Dominquez-Escalante HT, Honeymoon HT, or the Old Spanish NHT. From the middleground views of these three trails, the lines and forms introduced by the project components would not be visually evident.</li> </ul>

**Table 5-136**  
**Description of Direct Impacts from Pipeline and Transmission Alignments on Landscape Character and Views from Sensitive Viewing Platforms**

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Visual Assessment Unit (VAU)	Direct Impacts from Pipeline (Foreground/Middleground)	Direct Impacts from Electric Transmission System (Foreground/Middleground)
<b>21. Sand Hollow</b>  Proposed Action (South Alternative) Sand Hollow Hydro Station Electric Transmission System (Sand Hollow to Dixie Springs Transmission Line and Hurricane Cliffs Hydro Station to Hurricane West Transmission Line)  This VAU includes the following stationary/linear KOPs and linear platforms: Stationary KOPs: #41 Sand Hollow State Park Other Linear Platforms: Dominguez-Escalante HT Honeymoon HT Old Spanish NHT Temple HT Zion Scenic Byway	<p><b>Proposed Action</b></p> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li><b>Short-Term-</b> Ground-disturbing activities would remove a uniform area of low, dense, evenly spaced vegetation, expose lighter soils, and cut through several washes and rock formations. The lines and forms of the project components including two staging areas that would clear a total of approximately 110 acres and the Sand Hollow Hydro Station would not draw attention and would create a subtle change from the characteristic landscape in the short-term because of the existing large areas of disturbance. The Proposed Action would create a negligible change in the middleground because the disturbance created by the construction of the project components would not be visually evident viewed from this distance.</li> <li><b>Long-Term-</b> The vertical lines and rectangular forms of the project components would attract attention in the landscape in the foreground. The degree of change within the foreground of the reservoir would be notable. The hydro station would encompass approximately 6 acres. The Proposed Action would create a subtle change in the middleground because the project components would be visually subordinate from this distance.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li><b>Stationary KOP -</b>KOP #41 would be outside the foreground distance zone of the Proposed Action. Within the middleground, the contrast of the project components when viewed from KOP #41 would be subtle because the components would create weak contrast and be generally compatible when viewed from this distance especially with the backdrop of the Hurricane Cliffs.</li> <li><b>Other Linear Platforms -</b> The Dominguez-Escalante HT, Temple HT, and Old Spanish NHT are also present in this VAU. From the middleground views of the Temple HT and Old Spanish NHT, the lines and forms introduced by the project components would not be visually evident. The project components would be approximately 1.0 mile from the Dominguez-Escalante HT and would create a weak contrast in the setting when viewed from this distance.</li> </ul>	<p><b>Proposed Action</b></p> <ul style="list-style-type: none"> <li>There would be no new substations located within the VAU.</li> </ul> <p><b>Change in Landscape Character</b></p> <ul style="list-style-type: none"> <li><b>Short-Term -</b> In this VAU, the clearing of vegetation for the two transmission lines would be a relatively small, circular clearing (approximately 36 inches in diameter for each pole) that would occur along the alignment at approximately every 750 feet. The construction of the approximately 4 mile-long 69 kV Sand Hollow to Dixie Springs Transmission Line would introduce visual elements that are common in the characteristic landscape. The construction of the approximately 9 mile-long 345 kV Hurricane Cliffs Hydro Station to Hurricane West Transmission Line would also introduce visual elements that are common in the setting. The Electric Transmission System Alternative would not attract attention from the natural setting because of the negligible change that would be created by this alternative in the foreground or middleground.</li> <li><b>Long-Term –</b> Within the foreground of the VAU, there are no other existing transmission lines. The elements created by the two transmission lines would attract attention and create a notable change in the foreground of the setting. Within the middleground, this electric power generating alternative would not attract attention and would not be visually evident in the setting.</li> </ul> <p><b>Effects on Views from Sensitive Viewing Platforms</b></p> <ul style="list-style-type: none"> <li><b>Stationary KOP –</b>This alternative would not be within the foreground of KOP #41. Within the middleground, the contrast of the 69 kV and the 345 kV lines when viewed from KOP #41 would be subtle because the components would be visually subordinate in the setting.</li> <li><b>Other Linear Platforms -</b> None of the four trails would be present in the foreground of either 69 kV or 345 kV transmission lines. Both transmission lines would parallel the Dominguez-Escalante HT, while the other three trails would be perpendicular to the lines in the middleground. The transmission lines, would not be visually evident from the Old Spanish NHT, the Honeymoon HT, and Temple HT. From the middleground views of the Dominguez-Escalante HT, the contrast that would be created by the 69 kV and 345 kV when viewed from the trail would be weak because the components would be visually subordinate in the setting. The proposed transmission line would cross Highway 9 at a perpendicular angle just west of Hurricane, which is a designated segment of the Zion Scenic Byway. From the foreground of the byway, the contrast that would be created by the 69 kV Sand Hollow to Dixie Springs Transmission Line would be weak because the components would be visually subordinate to the other cultural modifications associated with the Hurricane community setting. The 69 kV line would create a negligible degree of contrast in the middleground of the scenic byway.</li> </ul>

**Table 5-137**  
**List of Visual Simulation for the Proposed Action by KOP**

KOP No.	Simulation Name/Subject	Corresponding VAU Number and Name
2	Former McDonalds Parking Lot	1- Lake Powell / Glen Canyon Unit
3	Gravel Pullout near Bridge	1- Lake Powell / Glen Canyon Unit
4	Chains Day Use Area	1- Lake Powell / Glen Canyon Unit
4	Chains Day Use Area (NG)	1- Lake Powell / Glen Canyon Unit
5	Lake Powell Lake Surface	1- Lake Powell / Glen Canyon Unit
5	Lake Powell Lake Surface (NG)	1- Lake Powell / Glen Canyon Unit
6	Wahweap Overlook	2- Wahweap Unit
9	Grand Staircase-Escalante National Monument Visitor Center	3- Big Water Unit
10	BPS-2 from Highway 89 Eastbound	3- Big Water Unit
10	BPS-2 from Highway 89 Eastbound (NG)	3- Big Water Unit
10	BPS-2 from Highway 89 Westbound	3- Big Water Unit
10	BPS-2 from Highway 89 Westbound (NG)	3- Big Water Unit
11b	BPS-3(Alt) from Highway89	4-East Clark Bench Unit
11b	BPS-3 (Alt) from Highway 89 (NG)	4-East Clark Bench Unit
12b	BPS-3 (Alt)from Cottonwood Road	4-East Clark Bench Unit
12b	BPS-3 (Alt)from Cottonwood Road (NG)	4-East Clark Bench Unit
13	Highway 89 near Toadstools Trailhead	5- Rimrocks / Paria River Valley Unit
14	Toadstools Trailhead	5- Rimrocks / Paria River Valley Unit
18	BPS-4 (Alt) from Eastbound Highway 89 (tangential view)	7- Fivemile Valley Unit
18	BPS-4 (Alt) from Eastbound Highway 89 (tangential view) (NG)	7- Fivemile Valley Unit
20	Hydro Station 1 from Highway 89	8- Telegraph Flat Unit
21	High Point Regulation Tank 2 from Great Western Trailhead	8- Telegraph Flat Unit
24	Highway 89 near Pioneer Gap	9- Kanab / Vermilion Cliffs Unit
26	Shinarump Cliffs Overlook	10- Whitesage Wash Unit
28	Kanab Creek (Kanab Creek ACEC)	12- Jacob Canyon / Kanab Creek / Pipe Valley Unit
29	Bitter Seeps Wash (Kanab Creek ACEC)	12- Jacob Canyon / Kanab Creek / Pipe Valley Unit
30	Mount Trumbull Road	12- Jacob Canyon / Kanab Creek / Pipe Valley Unit
33	Hydro Station 2 South from Co. Rd 239	14- Cottonwood Wash Unit
34	Hydro Station 3 from Uzona Avenue	15- Colorado City / Hildale Unit
35	Uzona Avenue/Canaan Wash	16- Uzona / Canaan Wash Unit
37	Little Creek Overlook	18- Frog Hollow Unit
38	Hydro Station 4 (Alt) from Frog Hollow Road	18- Frog Hollow Unit
39	Hurricane Cliffs Road (view to south)	19- Hurricane Cliffs Road Unit
40	Hurricane Cliffs – Unnamed Off-Highway-Vehicle Road	19- Hurricane Cliffs Road Unit

Source: Logan Simpson Design Inc.

Note: ACEC = area of critical environmental concern; BPS = booster pump station; KOP = key observation point; VAU = visual assessment unit

**Table 5-138**  
**Summary of Direct Impacts by VAU/Platform for the Proposed Action**

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No.	Visual Assessment Unit (VAU) / Sensitive Viewing Platform	Short-Term		Long-Term	
		Foreground	Middleground	Foreground	Middleground
<b>1</b>	Lake Powell/Glen Canyon <sup>1</sup>	Low	Very Low	Low	Very Low
	KOP 1 <sup>3</sup>	NP	NV	NP	NV
	KOP 2	NP	Very Low	NP	Very Low
	KOP 3	NP	Very Low	NP	Very Low
	KOP 4	Low	Very Low	Moderate	Very Low
	KOP 5	Low	Very Low	Moderate	Very Low
	Old Spanish NHT <sup>4</sup>	NP	Very Low	NP	Very Low
	Dominguez-Escalante HT	NP	Very Low	NP	Very Low
	Honeymoon HT	NP	Very Low	NP	Very Low
	Highway 89	Low	Very Low	Low	Very Low
<b>2</b>	Wahweap	Moderate	Low	Moderate	Very Low
	KOP 6	NP	Low	NP	Very Low
	Old Spanish NHT	NP	Low	NP	Very Low
	Dominguez-Escalante HT	Moderate	Low	Low	Very Low
	Highway 89	Moderate	Low	Moderate	Very Low
<b>3</b>	Big Water	Moderate	Low	Low	Very Low
	KOP 7	Moderate	Low	Moderate	Very Low
	KOP 8	Moderate	Low	Low	Very Low
	KOP 9	Moderate	Low	Low	Very Low
	KOP 10	Moderate	Low	High	Very Low
	Old Spanish NHT	Moderate	Low	High	Very Low
	Hwy 89	Moderate	Low	High	Very Low
<b>4</b>	East Clark Bench	Low	Very Low	Moderate	Very Low
	KOP 12b	NP	Very Low	NP	Moderate
	KOP 11b	Low	Very Low	Strong	Very Low
	Old Spanish NHT	Low	Very Low	Moderate	Very Low
	Highway 89	Low	Very Low	High	Very Low
<b>5</b>	Rimrocks/Paria River Valley	Moderate	Very Low	Moderate	Very Low
	KOP 14	Moderate	Very Low	Moderate	NP
	KOP 13	Moderate	Very Low	Low	NP
	KOP 15	Moderate	Very Low	Low	Low
	Old Spanish NHT	Moderate	Very Low	Low	Very Low
	Highway 89	Moderate	Very Low	Low	Very Low
<b>6</b>	Cockscomb	Moderate	Very Low	Moderate	Very Low
	Highway 89	Moderate	-Very Low	Moderate	Low
<b>7</b>	Fivemile Valley	Moderate	Very Low	Low	Very Low
	KOP 18	Moderate -	Very Low	Moderate	Low
	Old Spanish NHT	NP	Very Low	NP	Very Low
	Highway 89	Moderate	Very Low	Low	Very Low
<b>8</b>	Telegraph Flat	Moderate	Very Low	Moderate	Low
	KOP 19	Moderate	Very Low	Very Low	Very Low
	KOP 20	Moderate	Very Low	High	Low
	KOP 21	Moderate	Very Low	Low	Very Low
	Old Spanish NHT	Moderate	Very Low	High	Low
	Honeymoon HT	NP	Very Low	NP	Low
	Highway 89	Moderate	Very Low	High	Low
<b>9</b>	Kanab/Vermilion Cliffs	Moderate	Very Low	Moderate	Very Low
	KOP 24	NP	Very Low	NP	Very Low
	KOP 25	Moderate	Very Low	High	Very Low
	Old Spanish NHT	Moderate	Very Low	Low	Low
	Honeymoon HT	Moderate	Very Low	Low	Low
	Fredonia-Vermilion Cliffs Scenic Road	Moderate	Very Low	Low	Low

**Table 5-138**  
**Summary of Direct Impacts by VAU/Platform for the Proposed Action**

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No.	Visual Assessment Unit (VAU) / Sensitive Viewing Platform	Short-Term		Long-Term	
		Foreground	Middleground	Foreground	Middleground
<b>10</b>	Whitesage Wash	Moderate	Very Low	Low	Low
	KOP 26	NP	Very Low	NP	Low
	KOP 27	Moderate	Very Low	Low	Very Low
	Honeymoon HT	Moderate	Very Low	Low	Very Low
	Dominguez-Escalante HT	Moderate	Very Low	Low	Very Low
<b>12<sup>s</sup></b>	Jacob Canyon/Kanab Creek/Pipe Valley	Moderate	Very Low	Moderate	Very Low
	KOP 28	Moderate	Very Low	Moderate	Very Low
	KOP 29	Moderate	Very Low	Moderate	Very Low
	KOP 30	Moderate	Very Low	Low	Very Low
	Dominguez-Escalante HT	Moderate	Very Low	Low	Very Low
	Honeymoon HT	Moderate	Very Low	Low	Very Low
	Mount Trumbull Road	Moderate	Very Low	Low	Very Low
	County Road 239	Moderate	Very Low	Low	Very Low
<b>15</b>	Cottonwood Wash	Moderate	Very Low	Moderate	Very Low
	KOP 32	Moderate	Very Low	High	Low
	KOP 33	Moderate	Very Low	High	Low
	Old Spanish NHT	Moderate	Very Low	High	Low
	Highway 389	Moderate	Very Low	High	Low
	County Road 239	Moderate	Very Low	High	Low
<b>16</b>	Colorado City/Hildale	Low	Very Low	Low	Very Low
	KOP 34	Low	Very Low	Low	Very Low
	Old Spanish NHT	Low	Very Low	NP	Very Low
	Highway 389	Low	Very Low	Low	Very Low
<b>17</b>	Uzona-Canaan Wash	Moderate	Low	Moderate	Very Low
	KOP 35	Moderate	Low	Moderate	Very Low
	Old Spanish NHT	NP	Low	NP	Very Low
<b>18</b>	Short Creek	Very Low	Very Low	Very Low	Very Low
	KOP 36	Very Low	Very Low	Very Low	Very Low
	Old Spanish NHT	Very Low	Very Low	Very Low	Very Low
<b>19</b>	Frog Hollow	Moderate	Low	Low	Low
	KOP 37	Moderate	Low	NP	High
	KOP 38	Moderate	Low	High	Very Low
	Old Spanish NHT	Moderate	Low	Very Low	Very Low
	Honeymoon HT	Moderate	Low	Very Low	Very Low
<b>20</b>	Hurricane Cliffs Road	Moderate	Low	Very High	Moderate
	KOP 39	Moderate	Low	Very High	Low
	KOP 40	Moderate	Low	High	Low
	Old Spanish NHT	NP	Low	NP	Very Low
	Dominguez-Escalante HT	NP	Low	NP	Very Low
	Honeymoon HT	NP	Low	NP	Very Low
<b>21</b>	Sand Hollow	Low	Very Low	Moderate	Very Low
	KOP 41	NP	Very Low	NP	Low
	Old Spanish NHT	NP	Very Low	NP	Low
	Dominguez-Escalante HT	NP	Very Low	NP	Low
	Temple HT	NP	Very Low	NP	Low

Source: Logan Simpson

Notes:

(<sup>1</sup>) Italicized text denotes the magnitude of the potential change in the characteristic landscape.

(<sup>2</sup>) Very Low = negligible/none, Low = subtle/weak, Moderate = notable/ moderate, High = substantial/strong, Very High = severe/very strong, NP= not present, NV= not visible

(<sup>3</sup>) Gray shading denotes the magnitude of the potential effect on views from sensitive viewing platforms.

(<sup>4</sup>) NHT= National Historic Trail, HT= Historic Trail

(<sup>5</sup>) VAU numbers 11, 13 and 14 do not occur in this table because the Proposed Action would not be located in these VAUs.

### **5.3.16.2.2.1 Summary of Direct, Short-term Effects from the Proposed Action on Landscape Character.**

This section summarizes the direct, short-term effects in the foreground and middleground distance zones from the proposed pipeline alignment and facilities as planned for the Proposed Action. The direct, short-term effects for the magnitude of change in the landscape character in the foreground and middleground for each VAU are described in Table 5-136. These potential effects would be the same as the short-term effects on the foreground and middleground views from the sensitive viewing platforms.

Ground disturbing activities associated with construction of the pipeline would remove a band of existing vegetation approximately 120 feet wide. A slightly smaller 110-foot-wide disturbance would occur along the short stretch of smaller pipeline that extends from the primary penstock to the future Kane County Water Treatment Plant (WTP). Intermittent pressure-relieving valves with vent structures in below-ground at-grade vaults would be located along the Proposed Action alignment, and would occur on the pipeline extending to the future Kane County WTP. These structures would occur at various pipeline and penstock points along the Proposed Action. The valves and vent structures would be in buried vaults. The installation of the valve structures would not remove additional vegetation outside the 120-foot-wide disturbance area. The at-grade vault shapes would create varying degrees of contrast with the lines and forms of the existing landscape. Eleven of the 18 VAUs in the Proposed Action would be directly affected by project facilities, including VAUs 1, 3, 4, 7, 8, 9, 15, 16, 19, 20, and 21. The clearing of sage-scrub vegetation on the proposed facility sites would create large rectangular shapes in the characteristic landscape in areas void of cultural modifications associated with rural development and would result in varying degrees of contrast.

Staging sites would also be located in many of the VAUs, which would increase the area of disturbance in the existing landscape. These sites would vary in size from approximately 3 acres to 83 acres and would not remain in permanent use but would require clearing of vegetation in large rectangular shapes. The contrast from staging areas would diminish over time.

The degree of contrast with existing vegetation that would be created by the project would depend primarily on the height (low 0-5 feet, medium 5-20 feet, and high -greater than 20 feet), texture/pattern, or color of the vegetation. The proposed pipeline and related project components area of disturbance would generally be more visible in areas with low vegetation because the adjacent undisturbed vegetation does not sufficiently obstruct views of the disturbance. Areas with low to medium height vegetation would more effectively obstruct views of the disturbance. The height of the vegetation is generally low in five of the 18 VAUs that the Proposed Action would pass through (VAUs 1, 2, 4, 20, and 21) and is low to medium in the remaining 13.

The Proposed Action would generally contrast more with existing vegetation that is dense and even in texture/pattern, because the lines and form of the pipeline disturbance would be more distinct. The vegetative texture/pattern in 12 of the VAUs is generally dense and/or even. The remaining six VAUs (1, 5, 6, 7, 17, and 20) include vegetation that is generally sparse, irregular, mottled, random, or variable in texture/pattern and the proposed pipeline and related project component disturbance would result in lower contrast than in areas with dense/even vegetation.

The color of the existing vegetation would also influence the degree of contrast that the proposed pipeline and related project components area of disturbance would create. The disturbance would generally contrast less with existing vegetation in areas with a higher occurrence of grasses due to the buff color of the vegetation in the dry seasons. The buff color would contrast less with the exposed earth-toned soil colors, particularly where the soil color is buff to brown in color. Higher occurrences of grasses are found in three VAUs, including VAUs 4, 10, and 12. In addition, color contrast would also be increased in areas with stippled to patchy pinyon/juniper vegetation. The irregular patterns of dark green vegetation in these existing landscapes contrast with the surrounding desert scrub vegetation. If bands of the dark green vegetation were removed, the irregular patterns

would be bisected by a regular pattern with distinct lines and forms that would contrast with the existing vegetative patterns.

The ground-disturbing activities would affect the landform throughout the area of potential effect by exposing lighter soils, which would contrast with the adjacent soils and vegetation. In areas where the project would cross rock formations, rock/wash formations, and vertical rock faces of creeks and rivers, modifications to the rock formations would be visible and would alter the existing landform in most locations. Effects on rock formations would occur throughout the area of potential effect but would be most notable in VAUs 5, 6, and 12. The rock cuts to the candy-striped badland formations in VAU 5 would create noticeable contrast in the short- and long-term because of the inability to blend with the distinct rock stratifications, changes to the rock formation shapes, and potential localized erosion. In VAU 6, the Cockscomb Unit, the pipeline disturbance would considerably increase existing rock cut slopes alongside Highway 89. These effects would create a noticeable change in the characteristic landscape and would have a noticeable effect on the existing degree of enclosure from adjacent landforms because new cut slopes would be located further back from the edge of Highway 89. The project would also cut through the deeply incised Kanab Creek and Bitter Seeps Wash formations in VAU 12. This would create a noticeable change to the striated rock walls of both formations in the short-term.

The degree of contrast from the proposed pipeline and related project components disturbance would also be influenced by the slopes on which the pipeline would cross. The degree of contrast would increase in areas where the alignment passes over rolling or vertical landforms because the disturbance would intermittently be elevated and would more directly face the viewer. These elevated disturbances would introduce distinct lines and forms into the landscapes, which would often be inconsistent with the lines and forms already present in the landscapes. VAUs with mostly flat terrain would generally have the least amount of contrast associated with slopes, though noticeable contrast could occur at isolated locations within the VAUs. The VAUs with predominately flat to gentle rolling terrain occur in seven VAUs, including VAUs 2, 4, 9, 10, 12, 16, and 18.

Existing cultural modifications within the VAUs would also affect the amount of contrast that the proposed pipeline and related project components area of disturbance would create. VAUs with greater amounts of cultural modification would generally be affected less by the lines and forms introduced by the disturbance. The VAU with the highest degree of existing cultural modification is VAU 1 (Lake Powell/Glen Canyon). Cultural modifications would also affect the level of contrast created by the Proposed Action in portions of VAU 3 Big Water and VAU 16 Colorado City/Hildale.

The proposed pipeline and related project components area of disturbance would also parallel existing roads and/or pipeline/penstock alignments throughout much of the area of potential effect. The lines and form of the pipeline and penstock disturbance would be similar to the lines and forms of the existing paved roads and would create a subtle degree of contrast with the cultural modifications in these areas. Contrast could be slightly increased in areas where the proposed pipeline and related project components area of disturbance would follow existing unpaved roads and pipelines because the scale (width) of the disturbance would be greater than the existing landscape modifications. The Proposed Action would generally parallel existing roads, pipelines, or both through 12 of the 18 VAUs that the Proposed Action passes through. In addition, VAUs 10 and 18 would include a new permanent maintenance road over the penstock.

The varying degrees of contrast from the proposed pipeline and related project components area of disturbance throughout the area of potential effect would result in differing magnitudes of change in the foreground and middleground of the VAUs along the Proposed Action. The magnitude of change in the setting in the foreground to VAU 18 would be negligible and to VAUs 1, 4, 16 and 21 would be subtle/low and would not attract attention. The magnitude of change in the foreground for the remaining 13 VAUs would be notable/moderate in the short-term. The magnitude of change in the setting in the middleground would be negligible in 13 VAUs and to five VAUs (2, 3, 17, 19, and 20) the change would be subtle/low and would not attract attention.

### **5.3.16.2.2.2 Summary of Direct Long-term Effects on Landscape Character from the Proposed Action.**

This section summarizes the direct, long-term effects in the foreground and middleground distance zones from the proposed pipeline alignment and facilities as planned for the Proposed Action. The direct, long-term effects for the magnitude of change in the landscape character in the foreground and middleground for each VAU are listed in Table 5-136. The proposed pipeline and related facilities would introduce vertical lines and rectangular forms that would contrast with the lines and forms of the natural settings that would be in operation for the life of the Proposed Action.

In the foreground of VAU 18, no apparent change in the setting would occur because the Proposed Action would repeat the existing form and line elements that are common in the setting. Similarly, in 14 VAUs, the proposed pipeline and related facilities would not be visible or perceived in the landscape in the middleground in 14 VAUs. A low/subtle magnitude of change would occur in VAUs 1, 7, 10, and 16 in the foreground of the VAUs and 3 VAUs (8, 10, and 19) in the middleground. Because the lines and forms of the facilities would be similar to those of the existing landscape, the degree of contrast would be weak and would not attract attention. The existing visual elements and patterns of the cultural modifications (i.e., existing transmission lines, substation, Glen Canyon Dam, and development associated with the city of Page) present within this VAU would diminish the visual prominence of the Intake Pump Station, and BPS-1 facilities. The BPS-1 facility would be located near an existing ADOT maintenance facility and the lines and forms of this facility would be similar in scale and form to the existing structures at that facility. Views of BPS-4 (Alt.) associated with the proposed pipeline alignment in VAU 7 would also be partially obstructed due to the location of the facility in a valley and behind rolling hills. The HS-3 facility in VAU 16 would create a subtle change in the setting because the project components would repeat form, line, texture and scale common in the characteristic landscape in the foreground of the VAU.

The magnitude of change to ten VAUs (2, 4, 5, 6, 8, 9, 12, 15, 17, and 21) from proposed pipeline and related facilities would be moderate/notable in the foreground. Although the Proposed Action would add distinct vertical lines and forms to the landscape, they would be similar to lines and forms of the adjacent cultural modifications. Hydro Station 1 and High Point Regulating Tank-2 facilities in VAU 8 would create a moderate degree of contrast because the distinct lines and bold, rectangular forms of the facility would begin to dominate the landscape. The future Kane County WTP in VAU 9, the HS-2 South in VAU 15, and the Sand Hollow Hydro Station in VAU 21 would contrast to a moderate degree with the existing landscape and would attract attention in the foreground of the respective VAUs. The proposed pipeline alignment would pass over rolling landforms and/or rock formations in VAUs 2, 5, 6, 12, and 17. The disturbance area created by the uniform pipeline alignment would be more visually prominent in the foreground and would draw attention from the natural setting, which would result in a notable change in the landscape character. VAU 20 would create moderate/notable changes in the middleground because of the prominence of the Hurricane Cliff Afterbay Reservoir in the setting.

A high/substantial magnitude of change would occur in VAU 19 and would reflect differing degrees of contrast for multiple facilities within the VAUs. The magnitude of change to VAU 8 would be high. The magnitude of change to VAU 20, the Hurricane Cliffs Road unit, with the Hurricane Cliffs Hydro facility, would contrast with the existing landscape strongly in line and form. The hydro facility would alter the landscape substantially and would begin to dominate the landscape.

The proposed facilities would create a high magnitude of change for the remaining VAUs that would be affected, including VAUs 3 and 19. The presence of the BPS-2 facility in VAU 3 would create a substantial degree of change to the landscape by introducing an industrial facility into a remote rural area. The vertical lines and rectangular forms of this facility would begin to dominate the landscape in the foreground. In VAU 19, HS-4 (Alt) would be located along Frog Hollow Road and the facility's presence would create a high/substantial degree of change to the landscape by introducing an industrial facility into a remote rural area. The vertical lines and rectangular forms of the HS-4 (Alt) would begin to dominate the landscape in the foreground. The Hurricane Cliffs Forebay Reservoir would also be within this VAU. The degree of change within the foreground of the

reservoir would be high/substantial and would begin to dominate the view. In all of the VAUs with a high/substantial magnitude of change, the proposed facilities would create a high degree of contrast with the existing natural landscape and would be considered to generally be incompatible with the visual setting.

The vertical lines and rectangular forms of the project components in VAU 20 would dominate the landscape in the foreground. The Hurricane Cliffs Hydro Station and Afterbay Reservoir would create severe/very high degree of change in the setting within the foreground of the VAU because the project components would result in a very strong contrast in terms of line, form, texture, and scale in the setting.

#### ***5.3.16.2.2.3 Summary of Direct Effects on Views from Sensitive Viewing Platforms from the Proposed Action.***

The direct effects in the foreground and middleground distance zones from sensitive viewing platforms in the Proposed Action are listed in Table 5-136 and are summarized in this section. Viewing platforms within the VAUs include stationary and linear KOPs, historic trails, and existing roads. These platforms represent visually sensitive locations from which the casual observer experiences the scenic landscapes within the project area. The degree of change to the views from the platforms within each VAU varies based on the level of contrast that would be perceived from each platform. The amount of contrast perceived would also be directly correlated to the distance between the project and the viewing platform. Viewing platforms occur in both the foreground and middleground of the Proposed Action.

There would be a very low or negligible level of contrast when viewed from many of the platforms, primarily in the middleground distance zone. The Proposed Action would not be visually evident when viewed from the middleground at 48 of the platforms and at 5 platforms from the foreground (KOP 19 in VAU 8, KOP 36 and the Old Spanish NHT in VAU 18, and the Old Spanish NHT and Honeymoon HT in VAU 19).

There would be a low or weak degree of contrast created by the proposed waterline and associated facilities when viewed from 22 of the platforms in the foreground in 10 VAUs and 24 of the platforms in the middleground in 10 VAUs. The Proposed Action when viewed from these platforms would not attract attention and would be generally compatible with the setting.

The level of contrast when viewed in the foreground from 11 platforms in nine VAUs (1, 2, 3, 4, 5, 6, 8, 12, and 17) would be moderate and the Proposed Action would attract attention when viewed from these platforms. The contrast of the waterline in the long-term from Highway 89 in VAU 2, KOP 14 in VAU 5, Highway 89 in VAU 6, KOPs 28 and 29 in VAU 12, and KOP 35 in VAU 17 would be visually prominent in the characteristic landscapes from these viewing platforms because the waterline would cross rolling terrain and/or landforms where there would be unobstructed views in the foreground. The proposed facilities would create a moderate degree of contrast in the foreground views from KOPs 4 and 5 in VAU 1, KOP 7 in VAU 3, the Old Spanish NHT in VAU 4, and KOP 15 in VAU 5. The proposed BPS-3 (Alt) facility when viewed from the middleground of KOP 12b would create a moderate degree of contrast in terms of line, form, color, and texture not common the landscape and would only be somewhat compatible with the setting.

Fifteen of the viewing platforms in six different VAUs would be subject to a strong level of contrast and high degree of change to the views. The proposed project facilities would begin to dominate the foreground views from KOP 10, Old Spanish NHT, and Highway 89 in VAU 3, Highway 89 in VAU 4, KOP 30 and Old Spanish NHT in VAU 8, KOP 25 in VAU 9, KOP 28 in VAU 19, and KOP 40 in VAU 20. In addition HS-2 South would create a strong level of contrast in each of the five platforms in VAU 15. The Hurricane Cliffs Forebay Reservoir would also create a strong level of contrast in terms of line, form, and texture in the middleground view from KOP 37 in VAU 19.

When viewed in the foreground from KOP 39 in VAU 20, the Hurricane Cliffs Hydro Station and Afterbay Reservoir would create very strong contrast in terms of line, scale, and form in the characteristic landscape and

the facilities would dominate the setting. The approximately 50-acre hydroelectric generating station with its over 60-foot high powerhouse building, switchyard, and security fencing along with the approximately 200-acre reservoir would be add discordant visual elements and patterns to the relatively undisturbed setting when viewed in the foreground along Hurricane Cliffs Road (KOP 39).

#### **5.3.16.2.2.4 Effects on Scenic Roads and Byways.**

##### **Fredonia-Vermilion Cliffs Scenic Road/Highway 89A**

The Proposed Action would cross the Fredonia-Vermilion Cliffs Scenic Road once. The project components would introduce new, distinct horizontal lines and form that would parallel the existing Navajo-McCullough transmission line corridor in VAU 10. The new horizontal lines and form would, however, be consistent with the lines and form of the existing transmission line access road. Although the Proposed Action would not have an effect on the vividness or the unity scores within the character unit, the additional lines and forms would have a slight effect on the intactness of the unit. The original assessment determined that utility poles, the Navajo-McCullough 500 kV Transmission Line, and other linear cultural modifications were “somewhat distracting to the integrity of the unit.” The project would decrease the intactness of the unit slightly, from a score of 4.9 to a score of 4.7. The total score for the Johnson Run Unit would decrease from 12.8 to 12.6 and would remain in the moderately high range.

##### **Zion Park Scenic Byway/Highway 9**

The Proposed Action would be greater than five miles from the Zion Park Scenic Byway; therefore there would be no effect on the designated scenic byway.

#### **5.3.16.2.2.5 Effects on Historic Trails.**

Effects on the historic trails in the area of potential effect would be dependent on the accurate location of the trails, which is currently unknown. Effects are therefore discussed based on the currently available data.

##### **Old Spanish NHT**

The Proposed Action would cross the Armijo Route of the Old Spanish NHT a total of six times and twice in VAU 18. The project generally follows the NHT through 15 VAUs, including VAUs 1, 2, 3, 4, 5, 7, 8, 9, 15, 16, 17, 18, 19, 20, and 21. The magnitude of potential effect on foreground views from the NHT would range from very low to high. The Proposed Action would attract attention, create strong contrast, and would begin to dominate the landscape in the foreground of the NHT near the BPS-2, HS-1, and HS-2 South facilities in VAUs 3, 8, and 15 respectively. Near BPS-3 (Alt) in VAU 4, this proposed facility would create a moderate level of contrast in the foreground of the NHT. When the Proposed Action is viewed in the middleground of the Old Spanish NHT, it would be either low or very low in terms of the magnitude of effect on the view from the trail.

##### **Dominguez-Escalante Historic Trail**

The Proposed Action would cross the Dominguez-Escalante HT a total of three times; once in each of the VAUs (2, 10, and 12). The magnitude of potential effects on the foreground views of the HT in these three VAUs would be low because the project components would create a weak contrast. The HT is present within the middleground of six VAUs, including VAUs 1, 2, 10, 12, 20, and 21. The Proposed Action would create subtle or no apparent change because the lines and forms of the project components would result in a weak to negligible degree of contrast when viewed in the middleground of the Dominguez-Escalante HT.

## **Honeymoon Historic Trail**

The Proposed Action would cross the Honeymoon HT once in VAU 10. The project components would be viewed from the foreground of this HT from four VAUs (9, 10, 12, and 19) and from the middleground of seven VAUs, including VAUs 1, 8, 9, 10, 12, 19, and 20. The potential changes to the characteristic landscape when viewed in the foreground or middleground of this HT would be subtle or would create no apparent change because the lines and forms of the project would create a weak to negligible degree of contrast.

## **Temple Historic Trail**

The Proposed Action would be present within the middleground view of the Temple HT in VAU 21. The magnitude of change for this VAUs ranges from very low to moderate. The HS-4 (Alt.) facility would be located approximately 3.5 miles from the trail and would create a subtle change from this distance.

### ***5.3.16.2.2.6 Effects on ACECs.***

Six ACECs are located in the vicinity of the project. The Kanab Creek ACEC, in the Arizona Strip District, is the only ACEC that the Proposed Action would directly cross. According to the Arizona Strip RMP, the Kanab Creek ACEC is designated for the protection of various resources, including scenic resources. The Proposed Action would cross this ACEC twice, first at Kanab Creek (approximately 0.5 miles), and again at Bitter Seeps Wash (approximately 0.3 miles). The Proposed Action would create a moderate, short-and long-term, direct effect on the Kanab Creek ACEC because of the landscape modification that would be created across the incised drainages of the Kanab Creek and Bitter Seeps Wash. Approximately 4.1 miles of the proposed pipeline alignment may be visible from the foreground of the ACEC and about 3.2 miles from the middleground based on the bare-earth visibility analysis. With the exception of the crossing of the two drainages, the Proposed Action would create low, short-and long-term, direct effects on foreground views because of the subtle landscape modification and weak level of contrast that would be created by the project components. In the middleground views of the Proposed Action would be very low because the magnitude of change to the landscape and the level of contrast would be negligible.

Johnson Spring ACEC would be located within the foreground of the Proposed Action. Approximately 2.4 miles of the proposed pipeline alignment may be visible from the foreground of Johnson Spring ACEC and approximately 8.7 miles in the middleground views. The Proposed Action would have a low to very low direct, short-and long-term effects in the foreground and middleground views from this ACEC because of the subtle to negligible change in landscape character and weak to negligible degree of contrast created by the project components.

The Canaan Mountain, Lone Butte, Moonshine Ridge, and Shinarump ACECs are located within the middleground distance zone from the Proposed Action. Effects from the Proposed Action would be very low, direct, short-and long-term effects in the middleground views from these ACEC because of the negligible change in both the landscape character and degree of contrast created by the project components from this distance zone.

### ***5.3.16.2.2.7 Effects on WAs and WSAs.***

There are three WAs (Canaan Mountain, Cottonwood Point, and Paria Canyon-Vermilion Cliffs), and four WSAs (Canaan Mountain, Cockscomb, Paria-Hackberry, and Wahweap) within the vicinity of the Proposed Action; the project components would not physically cross any of these areas nor would cross within the foreground of any of the WAs or the Canaan Mountain, Paria-Hackberry, or Wahweap WSAs. The Cockscomb WSA would be within the foreground of the Proposed Action. Approximately 8 miles of the Proposed Action including the BPS-3 (Alt) and BPS-4 (Alt) facilities may be visible within a portion of the foreground distance zone from the Cockscomb WSA based on the bare-earth visibility analysis. Within the foreground, BPS-3 (Alt) may be visible from about

95 acres within the Cockscomb WSA and BPS-4 (Alt) may be visible from about 170 acres within this WSA. The noise, dust, and traffic associated with construction of the facilities may have an effect on the qualities of naturalness and solitude in a small portion of this WSA closest to the Proposed Action. Effects from the Proposed Action overall would be low, direct, short-and long-term effects in the foreground views from this WSA because of the subtle change in the landscape character and a weak degree of contrast created by the project components from this distance zone. The dispersed nature of the pinyon/juniper vegetation in this portion the project area would help to reduce the visibility of the facilities from the view from the Cockscomb WSA. Portions of the Proposed Action may be visible in the middleground of this WSA. The project components would not be visually evident because of the distance and dispersed pinyon/juniper vegetation and would therefore have a very low, direct, short- and long-term effect on the middleground views from the Cockscomb WSA.

The project components would be located within the middleground views from the three WAs and the remaining three WSAs. The potential effects on views from these areas, however, would be very low because the changes from the Proposed Action would be similar in line, form, color, and texture to the existing cultural modifications in the visual resource area of potential effect. The Proposed Action would have no apparent change to middleground views from these WAs and WSAs from which the Proposed Action would be visible. The potential effect on middleground views from these WAs and WSAs from the Proposed Action would be very low, direct, short- and long-term effects.

#### ***5.3.16.2.2.8 Effects on National Monuments.***

##### **Pipe Springs National Monument**

The Proposed Action would be approximately 4 miles from the PSNM. From that middleground distance, views of the project components from the PSNM would not be visually evident. The magnitude of effects on the views from the PSNM would be negligible because the Proposed Action would not be discernible and there would be no apparent change to the setting.

##### **Vermilion Cliffs National Monument**

The proposed water pipeline at its closest point would be approximately 1.7 miles from the VCNM and BPS-1 and BPS-2 approximately 1.8 miles and 5.8 miles, respectively. From that middleground distance, views of the project components from the VCNM would not be visually evident. The magnitude of effects on the views from the VCNM would be negligible because the Proposed Action would not be discernible and there would be no apparent change to the setting.

#### ***5.3.16.2.2.9 Effects on Special Recreation Management Areas.***

Six RMAs may potentially have views of the Proposed Action. Three RMAs are located within the foreground and middleground distance zone of the project alignments: San Hills SRMA, Arizona Strip ERMA and Sand Mountain SRMA. In the San Hills SRMA and Arizona Strip ERMA the potential magnitude of change in the setting would range from low to moderate direct, short- and long-term effects within the foreground of the Proposed Action based on the magnitude of change in the characteristic landscape as noted in VAUs 2, 10, 12, 15, 16, and 17. Within the portion of the Sand Mountain SRMA that would be located in the foreground of the Proposed Action, the potential effect would range from moderate to very high, direct long-term effects because of the proposed Sand Hollow and Hurricane Cliffs hydro stations and the Hurricane Cliffs Afterbay Reservoir (refer to Table 5-136 for description of direct effects in VAUs 20 and 21).

Three RMAs occur within the middleground distance zone of the project alignments: Fredonia, Canaan Mountain, and St. George Basin SRMAs. As noted in Table 5-136 in VAUs, 9, 10, 12, 17, 18, and 19, the project components would not attract attention and for the most part would not be visually evident in the portions of these

SRMAs that would be located in the middleground of the Proposed Action. Therefore, the magnitude of change to the characteristic landscape in these three SRMAs would range from very low to low, direct short-and long-term effects in the middleground of the Proposed Action.

#### ***5.3.16.2.2.10 Effects on Sand Hollow State Park.***

The vertical lines and rectangular forms of the project components would attract attention and would create a moderate, direct long-term effect on the foreground views by boaters and/or informal Sand Hollow Reservoir recreationists when they are in the southeastern portion of the reservoir. The South Pipeline Alternative would create a negligible, direct, long-term effect on views from the middleground of Sand Hollow State Park because the project components would not be visually evident when viewed from this distance, which includes the existing campground and boat ramp located on the west side of the reservoir.

#### ***5.3.16.2.2.11 Effects on Kaibab Paiute Indian Reservation.***

Foreground views from the Kaibab-Paiute Indian Reservation would be limited to approximately 8.1 miles of the Proposed Action. The magnitude of change in the landscape would be notable and would attract attention. The Proposed Action would result in a moderate, direct short-term and long-term effect in the foreground of the Kaibab-Paiute Indian Reservation. From that middleground distance from the Kaibab-Paiute Indian Reservation, views of the project components would not be visually evident. The magnitude of effects on the views from the Kaibab-Paiute Indian Reservation would be negligible because the Proposed Action would not be discernible and there would be no apparent change to the setting.

The Southern Paiute Advisory Committee (SPAC) based on discussions with the Kaibab Paiute Tribal Council identified numerous culturally important resources within the project area. While it is understood that there may be other important resources, this analysis will consider the potential effects from a visual resource aspect to 17 culturally important resources discussed by the SPAC (SPAC 2012). The locations of these 17 resources are general in nature therefore the analysis of the potential effect on the landscape character will be consistent with the overall magnitude of changes with the given foreground and middleground of the VAU's setting. Of the 17, four may be within the foreground of the Proposed Action and the remaining 13 within the middleground from the project components. The four culturally important resources within the foreground of the Proposed Action would generally be located in VAUs 9 and 12. Depending on visibility, the project components would range from subordinate to prominent features in the setting and would create subtle to notable degrees of change in the characteristic landscape in the foreground. Therefore the effects to the characteristic landscape of the four culturally important resources within the foreground of the Proposed Action would range from low to moderate, direct, short-and long-term effects.

The 13 culturally important resources in the middleground of the Proposed Action are generally located within VAU 12. The Proposed Action may not be visible from one of the 13 culturally important resources based on the bare-earth visibility analysis assessed from the centerline of the proposed waterline. In the middleground, the South Pipeline Alternative would create a negligible effect on the setting in the short-and long-term to the remaining 12 culturally important resources because the project components would not be visually evident or perceived in the characteristic landscape.

#### ***5.3.16.2.2.12 Effects on Navajo Indian Reservation.***

A portion of the Navajo Nation, just south and east of Page, would be within the middleground of the Proposed Action. The majority of the project components would not be visible based on the bare-earth visual analysis. Where the Proposed Action would be visible, the existing lines, forms and colors and visual patterns of the existing cultural modifications would diminish the visual prominence of the Proposed Action including the Intake Pump Station, and BPS-1 facilities. The Proposed Action would create a negligible, direct short- and long-term

effect when the middleground of the Navajo Nation because there would be no apparent change in the characteristic landscape.

#### **5.3.16.2.3 Electric Transmission System.**

The following subsections qualitatively describe the potential direct effects on the VAUs and sensitive viewing platforms from the Electric Transmission System. Effects are described from east to west. In addition Table 5-139 summarizes the direct effects on the landscape character and to the views from the sensitive viewing platforms.

##### ***5.3.16.2.3.1 Summary of Direct, Short-term Effects from the Electric Transmission System on Landscape Character.***

The direct, short-term effects for the magnitude of change in the landscape character in the foreground and middleground for each VAU are listed in Table 5-136. These potential effects would be the same as the short-term effects on the foreground and middleground views from the sensitive viewing platforms.

Ground disturbing activities associated with construction of the various proposed transmission lines would have relatively small areas of disturbance for the installation of the poles. The Point of Interconnection Substation would as well clear approximately 0.2 acres and the propose staging area in VAU 2 would clear approximately 8 acres. In the short-term, the varying degrees of contrast from the proposed pipeline and related project components area of disturbance throughout the area of potential effect would result in very low to low magnitudes of change in the landscape and would not attract attention.

##### ***5.3.16.2.3.2 Summary of Direct Long-term Effects on Landscape Character from the Proposed Action.***

The direct, long-term effects for the magnitude of change in the landscape character in the foreground and middleground for each VAU are listed in Table 5-139.

**Table 5-139**  
**Summary of Direct Impacts by VAU/Platform for the Electric Transmission System**

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No.	Visual Assessment Unit (VAU) / Sensitive Viewing Platform	Short-Term		Long-Term	
		Foreground	Middleground	Foreground	Middleground
<b>1</b>	Lake Powell/Glen Canyon <sup>1</sup>	Very Low <sup>2</sup>	Very Low	Low	Very Low
	KOP 1 <sup>3</sup>	NP	Very Low	NP	Very Low
	KOP 2	NP	Very Low	NP	Very Low
	KOP 3	NP	Very Low	NP	Very Low
	KOP 4	Low	Very Low	Moderate	Very Low
	KOP 5	Low	Very Low	Moderate	Very Low
	Old Spanish NHT <sup>4</sup>	NP	Very Low	NP	Very Low
	Dominguez-Escalante HT	NP	Very Low	NP	Very Low
	Honeymoon HT	NP	Very Low	NP	Very Low
	Highway 89	Very Low	Very Low	Low	Very Low
<b>2</b>	Wahweap	Low	Very Low	Low	Very Low
	KOP 6	NP	Low	NP	Very Low
	Old Spanish NHT	NP	Low	NP	Very Low
	Dominguez-Escalante HT	Low	Low	Low	Very Low
	Highway 89	NP	Low	NP	Very Low
<b>3</b>	Big Water	Very Low	Very Low	Low	Very Low
	KOP 7	NP	Very Low	NP	Very Low
	KOP 8	NP	Very Low	NP	Very Low
	KOP 9	NP	Very Low	NP	Very Low
	KOP 10	Very Low	Very Low	Low	Very Low
	Old Spanish NHT	Very Low	Very Low	Low	Very Low
	Hwy 89	Very Low	Very Low	Low	Very Low
<b>4</b>	East Clark Bench	Very Low	Very Low	Low	Very Low
	KOP 12b	NP	Very Low	NP	Very Low
	KOP 11b	Very Low-	Very Low	Low	Very Low
	Old Spanish NHT	Very Low	Very Low	Low	Very Low
	Highway 89	Very Low	Very Low	Very Low	Very Low
<b>5</b>	Rimrocks/Paria River Valley	Very Low	Very Low	Low	Low
	KOP 14	NP	Very Low	NP	Very Low
	KOP 13	NP	Very Low	NP	Very Low
	KOP 15	NP	Very Low	NP	Very Low
	Old Spanish NHT	NP	Very Low	NP	Very Low
	Highway 89	NP	Very Low	NP	Very Low
<b>6</b>	Cockscomb	Very Low	Very Low	Low	Low
	Highway 89	NP	Very Low	NP	Very Low
	KOP 18	NP	Very Low	NP	Very Low
	Old Spanish NHT	NP	Very Low	NP	Very Low
	Highway 89	NP	Very Low	NP	Very Low
<b>8</b>	Telegraph Flat	Very Low	Very Low	Low	Low
	KOP 19	NP	Very Low	NP	NV
	KOP 20	NP	NP	NP	NP
	KOP 21	NP	NP	NP	NP
	Old Spanish NHT	NP	Very Low	NP	Very Low
	Honeymoon HT	NP	NP	NP	NP
	Highway 89	-	-	Low	Very Low

**Table 5-139**  
**Summary of Direct Impacts by VAU/Platform for the Electric Transmission System**

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No.	Visual Assessment Unit (VAU) / Sensitive Viewing Platform	Short-Term		Long-Term	
		Foreground	Middleground	Foreground	Middleground
<b>15</b>	Cottonwood Wash	Very Low	Very Low	Low	Very Low
	KOP 32	Very Low	Very Low	Low	Very Low
	KOP 33	Very Low	Very Low	Low	Very Low
	Old Spanish NHT	Very Low	Very Low	Low	NP
	Honeymoon HT	NP	Very Low	NP	Very Low
	Highway 389	Very Low	Very Low	Low	Very Low
	County Road 239	Very Low	Very Low	Low	Very Low
<b>16</b>	Colorado City/Hildale	Very Low	Very Low	NV	NV
	KOP 34	Very Low	Very Low	NV	NV
	Old Spanish NHT	Very Low	Very Low	NV	NV
	Highway 389	Very Low	Very Low	NV	NV
<b>19</b>	Frog Hollow	Low	Very Low	Moderate	Very Low
	KOP 37	NP	Very Low	NP	Very Low
	KOP 38	Low	Very Low	Moderate	Very Low
	Old Spanish NHT	NP	Very Low	NP	Very Low
	Honeymoon HT	NP	Very Low	NP	Very Low
<b>20</b>	Hurricane Cliffs Road	Very Low	Very Low	Moderate	Low
	KOP 39	Very Low	Very Low	High	Low
	KOP 40	NP	Very Low	NP	Moderate
	Old Spanish NHT	NP	Very Low	NP	Very Low
	Dominguez-Escalante HT	NP	Very Low	NP	Very Low
	Honeymoon HT	NP	Very Low	NP	Very Low
<b>21</b>	Sand Hollow	Very Low	Very Low	Moderate	Low
	KOP 41	NP	Very Low	NP	Low
	Old Spanish NHT	NP	Very Low	NP	Very Low
	Dominguez-Escalante HT	NP	Very Low	NP	Low
	Temple HT	NP	Very Low	NP	Very Low
	Honeymoon HT	NP	Very Low	NP	Very Low
	Zion Scenic Byway	Very Low	Very Low	Low	Very Low

Source: Logan Simpson

Notes:

(1) Italicized text denotes the magnitude of the potential change in the characteristic landscape.

(2) Very Low = negligible/none, Low =subtle/weak, Moderate = notable/ moderate, High = substantial/strong, Very High = severe/very strong, NP= not present, NV= not visible

(3) Gray shading denotes the magnitude of the potential effect on views from sensitive viewing platforms.

(4) NHT= National Historic Trail, HT= Historic Trail

Electric Transmission System would introduce vertical and horizontal lines and rectangular forms that would change to varying degrees the characteristic landscape and would be in operation for the life of the project. Very low to low direct long-term effects on the landscape character would occur in VAUs 1, 2, 3, 4, 5, 6, 7, 8, 15, and 16 in the foreground and in the middleground. Because the lines and forms of the Electric Transmission System would be similar to those of the existing elements and patterns in the landscape, the degree of contrast would be weak or not visually evident and would not generally attract attention. The existing visual elements and patterns of the cultural modifications, most notably the presence of various types of transmission lines and poles would help to diminish the visual prominence and the lines and forms of the project components because the Electric Transmission System would be similar in scale and form to these existing transmission lines.

The magnitude of change to VAUs 19, 20, and 21 from proposed transmission related facilities would be moderate/notable in the foreground. The Electric Transmission System would add distinct vertical lines and forms

to the landscape, because there are no other transmission lines or substations. The elements from this power generating alternative would attract attention, be visually prominent, and would create a notable change in the foreground of the setting in these three VAUs. Within the middleground, this electric power generating alternative would not attract attention and would have negligible to very low direct long-term effects because the components would not be visually evident.

#### ***5.3.16.2.3.3 Summary of Direct Effects on Views from Sensitive Viewing Platforms from the Proposed Action.***

The direct effects in the foreground and middleground distance zones from sensitive viewing platforms in the Electric Transmission System are listed in Table 5-139 and Table 5-136 and are summarized in this section. Viewing platforms occur in both the foreground and middleground of the Electric Transmission System. There would be a very low/negligible or low/subtle levels of contrast when viewed from many of the platforms, in both the foreground and middleground distance zones. The Electric Transmission System would not be visually evident or attract attention in the setting when viewed at 17 sensitive viewing platforms from the foreground and 52 platforms in the middleground. The Electric Transmission System when viewed from these platforms would not attract attention and would be generally compatible with the setting.

The level of contrast when viewed in the foreground from 3 platforms in two VAUs (1 and 19) would be moderate and the Electric Transmission System would attract attention when viewed from these platforms. The transmission lines and structures would be intermittently visible and sky-lined above the horizon in the foreground views from KOP 4 and 5 in VAU 1. The effects to foreground views from these two stationary KOPs would be notable and the project components would be somewhat compatible with the visual setting. When viewed in the foreground from KOP 38 in VAU 19, the Electric Transmission System would attract attention, create moderate contrast in terms of line and form, and be visually prominent in the foreground of the setting. From the foreground from these three stationary viewing platforms, the Electric Transmission System would have a moderate, direct, long-term effect.

One stationary platform, KOP 39 in VAU 20, would be subject to a strong level of contrast and high degree of change to the views. The approximately 11-mile long 345 kV Hurricane Cliffs Hydro Station to Hurricane West Transmission Line would begin to dominate the foreground from KOP 39. The Electric Transmission System would have a high, direct, long-term effect on the foreground view from this sensitive viewing platform.

#### ***5.3.16.2.3.4 Effects on Scenic Roads and Byways.***

##### **Fredonia-Vermilion Cliffs Scenic Road/Highway 89A**

The Electric Transmission System would be greater than five miles; therefore the transmission lines would have no potential effects on the Fredonia-Vermilion Cliffs Scenic Road/Highway 89A.

##### **Zion Park Scenic Byway/Highway 9**

The Electric Transmission System would cross the Zion Scenic Byway/Highway 9 at a perpendicular angle just west of Hurricane. From the foreground of the byway, the contrast that would be created by the 69 kV Sand Hollow to Dixie Springs Transmission Line would be weak because the components would be visually subordinate to the other cultural modifications associated with the Hurricane community setting. The 69 kV line would create a negligible degree of contrast in the middleground of the scenic byway. The Electric Transmission System would have very low to low direct, long-term effects and would not lower the scenic quality or integrity of the Zion Scenic Byway overall.

### **5.3.16.2.3.5 Effects on Historic Trails.**

Effects on the historic trails in the area of potential effect would be dependent on the accurate location of the trails, which is currently unknown. Effects are therefore discussed based on the currently available data.

#### **Old Spanish NHT**

The level of contrast that would be created by the Electric Transmission System would be weak in the foreground for portions of the Old Spanish NHT in three VAUs (3, 4, and 15) and negligible in the middleground in 11 VAUs (1, 2, 3, 4, 5, 6, 7, 8, 19, 20, and 21). The Electric Transmission System would have very low to low direct short-and long-term effects in the middleground and foreground, respectively, from views from this NHT.

#### **Dominguez-Escalante Historic Trail**

The level of contrast that would be created by the Electric Transmission System would be weak in the foreground for portions of the Dominguez-Escalante HT in VAUs 2 and 21 and negligible in the middleground in 3 VAUs (1, 2, and 20). The Electric Transmission System would have very low to low, direct short-and long-term effects in the middleground and foreground, respectively, from views from this HT.

#### **Honeymoon Historic Trail**

The level of contrast that would be created by the Electric Transmission System would negligible in the middleground for portions of the Honeymoon HT in 5 VAUs (1, 15, 19, 20, and 21). The Electric Transmission System would have very low, direct short- and long-term effects in the middleground from views from the Honeymoon HT.

#### **Temple Historic Trail**

The level of contrast that would be created by the Electric Transmission System would negligible in the middleground for portion of the Temple HT in VAU 21. The Electric Transmission System would have very low, direct short- and long-term effects in the middleground from views from the Temple HT.

### **5.3.16.2.3.6 Effects on ACECs.**

The Electric Transmission System would be greater than five miles away from the six ACECs within the area of potential effect; therefore be no potential effects on the ACECs with scenic resource values.

### **5.3.16.2.3.7 Effects on WAs and WSAs.**

There are five WAs (Canaan Mountain, Cottonwood Canyon, Cottonwood Point, Cottonwood Forest, and Paria Canyon-Vermilion Cliffs), and three WSAs (Cockscomb, Paria-Hackberry, and Wahweap) within the vicinity of the Electric Transmission System. The project components would not physically cross any of these areas nor be located within the foreground of any of the WAs or WSAs with the exception of small portion of the Paria Canyon-Vermilion Cliffs WA and the Cockscomb WSA. Approximately 6 miles of the Electric Transmission System would be within a portion of the foreground distance zone of the Paria Canyon-Vermilion Cliffs WAs and approximately 0.1 mile within a portion of the foreground of the Cockscomb WSA. The noise, dust, and traffic associated with construction of the facilities may have an effect on the qualities of naturalness and solitude in a small portion of the WA and WSA closest to the Electric Transmission System. Effects from the Electric Transmission System overall would be low, direct, short-and long-term effects in the foreground views because of the subtle change in the landscape character and a weak degree of contrast created by the project components.

The project components would be located within the middleground views from all five of the WAs and the three WSAs. The potential effects on views from these areas, however, would be very low because the changes from the Electric Transmission System would be similar in line, form, color, and texture to the existing cultural modifications in the visual resource area of potential effect. The Electric Transmission System would have no apparent change to middleground views from these WAs and WSAs from which the Electric Transmission System would be visible. The potential effect on middleground views from these WAs and WSAs from the Electric Transmission System would be very low, direct, short- and long-term effects.

#### ***5.3.16.2.3.8 Effects on National Monuments.***

##### **Pipe Springs National Monument**

The Electric Transmission System would be greater than five miles away from the PSNM; therefore there would be no potential effects on the Monument.

##### **Vermilion Cliffs National Monument**

Approximately 12.4 miles of the Electric Transmission System would be within a portion of the foreground distance zone of the VCNM. Effects from the Electric Transmission System overall would be low, direct, short- and long-term effects in the foreground views because of the subtle change in the landscape character and a weak degree of contrast created by the project components. The Electric Transmission System would have no apparent change to middleground views from the VCNM from which the Electric Transmission System would be visible. The potential effect on middleground views from this Monument from the Electric Transmission System would be very low, direct, short- and long-term effects.

#### ***5.3.16.2.3.9 Effects on Special Recreation Management Areas.***

Portions of the approximately 4.7 miles of the 69 kV Sand Hollow to Dixie Springs Transmission Line and the approximately 1.1 miles of the 345 kV Hurricane Cliffs Hydro Station to Hurricane West Transmission Line would be located within the Sand Mountain SRMA. The elements created by the two transmission lines would attract attention and create a notable change in the foreground of the SRMA. Within the middleground, this electric power generating alternative would not attract attention and would be visually subordinate in the landscape within Sand Mountain SRMA. The magnitude of change to the characteristic landscape in this SRMA would range from moderate, direct short-and long-term effects in the foreground and low, direct short- and long-term effects in the middleground of the Sand Mountain SRMA.

#### ***5.3.16.2.3.10 Effects on Sand Hollow State Park.***

The approximately 4-mile long 69 kV Sand Hollow to Dixie Springs Transmission Line component of the Electric Transmission System would be located along the west edge of the Sand Hollow State Park. The presence of the 69 kV transmission lines would attract attention and create a notable change in the foreground of the setting from the Park. Within the middleground, this 69 kV line along with the approximately 9-mile long 345 kV Hurricane Cliffs Hydro Station to Hurricane West Transmission Line would not attract attention and would visually subordinate in the setting. Effects from the Electric Transmission System overall would be moderate, direct, short-and long-term effects in the foreground and low, direct, short- and long-term effects in the middleground from the Sand Hollow State Park.

### ***5.3.16.2.3.11 Effects on Kaibab Paiute Indian Reservation.***

The Electric Transmission System would be greater than five miles away from the Kaibab-Paiute Indian Reservation and any known culturally important resources; therefore there would be no potential effects on the Kaibab-Paiute Indian Reservation.

### ***5.3.16.2.3.12 Effects on Navajo Indian Reservation.***

A portion of the Navajo Nation, just south and east of Page, would be within the middleground of the Electric Transmission System. Where the Electric Transmission System would be visible, the existing lines, forms and colors and visual patterns of the existing cultural modifications would diminish the visual prominence of the Electric Transmission System. The Electric Transmission System would create a negligible, direct short- and long-term effect when the middleground of the Navajo Nation because there would be no apparent change in the characteristic landscape.

### **5.3.16.2.4 Summary of Proposed Action Effects.**

#### ***5.3.16.2.4.1 Conformance with BLM VRM Objectives.***

The BLM has developed measurable standards for managing the visual resources of BLM lands. Management classes with established objectives have been identified for visual resources in the area of potential effect as part of the RMPs process. The analysis described below determined whether or not the Proposed Action and its associated aboveground facilities along with the respective power generating alternatives would be in conformance with the established objectives. The BLM's Visual Resource Contrast System (BLM Handbook 8431-1) was used to evaluate the visual contrast between the Proposed Action and the existing landscape. The contrast rating evaluations were conducted from KOPs within the visual resources area of potential effect. Table 5-140 provides the location of each KOP with the VRM classes and the associated FO.

VRM class objectives would not be met in several VAUs, depending on the distance zones from which they would be viewed. The project would not meet VRM Class II in the foreground distance zone of 6 VAUs, (5, 6, 7, 7, 12, and 20). The associated project configurations within the VAUs noted above would include the following facilities:

- High Point Regulating Tank-2
- Hydro Station HS-1
- Hurricane Cliffs Afterbay Reservoir
- Hurricane Cliffs Hydro Station
- Hurricane Cliffs Hydro Afterbay

The Proposed Action would not meet VRM Class II in the middleground distance zone of VAU 20 with the proposed configuration. The associated project configurations within this VAU would include the following facilities:

- Hurricane Cliffs Hydro Station
- Hurricane Cliffs Afterbay Reservoir

**Table 5-140**  
**Associated VRM Classes for Key Observation Points for the Proposed Action**

No.	Key Observation Point	VRM Class	NPS/BLM
11b (linear)	BPS-3 (Alt) from Highway 89	IV	BLM – GSENM
12b	BPS-3 (Alt) from Cottonwood Road	III	BLM – GSENM
13 (linear)	Highway 89 near Toadstools Trailhead	II, III	BLM - GSENM
14	Toadstools Trailhead	II	BLM – GSENM
15	Paria Contact Station	II	BLM – GSENM
19	Road To Paria Interpretive Site	III	BLM – GSENM
20 (linear)	HS-1 from Highway 89	III	BLM – GSENM
21	High Point Regulation Tank 2 from Great Western Trailhead	III	BLM – GSENM
24	Highway 89 near Pioneer Gap	III	BLM – KANAB
26	Shinarump Cliffs Overlook	II, viewing III	BLM – AZ Strip FO
27	Dominguez-Escalante and Honeymoon Historic Trails Crossing	II	BLM – AZ Strip FO
28	Kanab Creek (Kanab Creek ACEC)	II	BLM – AZ Strip FO
29	Bitter Seeps Wash (Kanab Creek ACEC)	IV	BLM – AZ Strip FO
30	Mount Trumbull Road	IV	BLM – AZ Strip FO
33 (linear)	HS-2 South from County Road 239	III	BLM – AZ Strip FO
35	Uzona Avenue/Canaan Wash	III	BLM – St. George FO
36	Canaan Gap	IV	BLM – St. George FO
37	Little Creek Overlook	III, viewing IV	BLM – St. George FO
38	HS-4 (Alt) from Frog Hollow Road	IV	BLM – St. George FO
39	Hurricane Cliffs Road – View to South	IV	BLM – St. George FO
40	Hurricane Cliffs – From Unnamed Off-Highway-Vehicle Road	IV	BLM – St. George FO
Source: Logan Simpson			

VRM Class III would not be met within the foreground distance zone in 3 VAUs, including Unit 7 and Unit 8. The associated project configurations within the VAUs noted above would include the following facilities:

- High Point Regulating Tank-2
- Hydro Station HS-1

Table 5-141 indicates the various management classes by BLM FO and by VAU, as well as the determination of whether the Proposed Action would be in conformance with the associated VRM class objectives. The

determination of conformance was based on the results of the contrast-rating evaluations at the KOPs. If there were no KOPs identified, the magnitude of change in the landscape character was based on the magnitude of change to the regional landscape character. Based on this evaluation, the Proposed Action would create changes to the landscape ranging from very low to high. The changes in many areas would be perceived by the casual observer, particularly at facility locations, because of the moderate to high level of contrast in visual elements of form, line, color and texture.

The majority of the Proposed Action would meet VRM objectives for Classes III and IV with implementation of the protection and mitigation measures as identified in Section 5.3.16.3. The exception would be HS-1 which would require additional mitigation measures to meet the associated VRM Class III designation in this area. For areas with a Class II designation, additional protection and mitigation measures would be required in some locations to further reduce potential effects. In addition, HS-1 would require additional mitigation measures as defined in this document in order to meet the associated VRM Class II designations in these areas. If standard and additional measures were implemented, along with site-specific mitigation measures that would be determined in the project Plan of Development, the changes associated with the project would be subordinate, i.e., repeat the basic elements found in the natural and cultural landscape characteristics.

#### **5.3.16.2.4.2 Indirect Effects on Visual Resources.**

The construction of the Proposed Action may result in short-term and long-term indirect effects. The cleared area for the project components specifically any new and/or improved access roads would create opportunities for people to park or access previously inaccessible areas of the landscape. This could result in trampling vegetation and additional resource damage, which would increase the magnitude of change in the characteristic landscape in these areas. It is anticipated that this would create a subtle change and would be visually subordinate in the setting. The access to the area of potential effect would also provide potential scenic viewing opportunities not currently available to many people.

**Table 5-141**  
**Proposed Action and Power Generating Alternatives Conformance with Visual Resource Management Class Objectives**

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KOP No. and Name/Associated Alternative	VRM Class	Contrast Rating	Conformance
<b>11b - BPS-3 (Alt) from Highway 89 (Kanab FO)</b>			
Proposed Action	IV	Strong	Meets
Proposed Action – Electric Transmission System	IV	Weak	Meets
<b>12b - BPS-3 (Alt) from Cottonwood Road (GSENM)</b>			
Proposed Action	IV	Moderate	Meets
Proposed Action – Electric Transmission System	IV	None	Meets
<b>13 - Highway 89 near Toadstools Trailhead (GSEMN)</b>			
Proposed Action <sup>1</sup>	II	Moderate	Does Not Meet
Proposed Action – Electric Transmission System	II	Weak	Meets
<b>14 - Toadstools Trailhead (GSENM)</b>			
Proposed Action	II	Moderate	Does Not Meet
Proposed Action – Electric Transmission System	II	Weak	Meets

**Table 5-141**  
**Proposed Action and Power Generating Alternatives Conformance with Visual Resource Management Class Objectives**

Page 2 of 3

KOP No. and Name/Associated Alternative	VRM Class	Contrast Rating	Conformance
<b>15 - Paria Contact Station (GSENM)</b>			
Proposed Action	II	Weak	Meets
Proposed Action – Electric Transmission System	II	None	Meets
<b>19 - Road To Paria Interpretive Site (GSENM)</b>			
Proposed Action	III	None	Meets
<b>20 - HS-1 from Highway 89 (GSENM)</b>			
Proposed Action	III	Strong	Does Not Meet
Proposed Action – Electric Transmission System	III	Weak	Meets
<b>21 - High Point Regulation Tank 2 from Great Western Trailhead (GSENM)</b>			
Proposed Action	III	Weak	Meets
Proposed Action – Electric Transmission System	III	Weak	Meets
<b>26 - Shinarump Cliffs Overlook (AZ Strip FO)</b>			
Proposed Action	III	Weak	Meets
<b>27 - Dominguez-Escalante and Honeymoon Trails Crossing (AZ Strip FO)</b>			
Proposed Action	III	Moderate	Meets
<b>28 - Kanab Creek {Kanab Creek ACEC} (AZ Strip FO)</b>			
Proposed Action	II	Moderate	Does Not Meet
	III	Moderate	Meets
	IV	Moderate	Meets
<b>29 - Bitter Seeps Wash {Kanab Creek ACEC} (AZ Strip FO)</b>			
Proposed Action	IV	Moderate	Meets
<b>30 - Mount Trumbull Road (AZ Strip FO)</b>			
Proposed Action	IV	Weak	Meets
<b>35 - Uzona Avenue/Canaan Wash (St. George FO)</b>			
Proposed Action	III	Moderate	Meets
<b>36 - Canaan Gap (St. George FO)</b>			
Proposed Action	IV	None	Meets
<b>37 - Little Creek Overlook (St. George FO)</b>			
Proposed Action	IV	Strong	Meets
Proposed Action – Electric Transmission System	IV	None	Meets
<b>38 - HS-4 (Alt) from Frog Hollow Road (St. George FO)</b>			
Proposed Action	IV	Strong	Meets
Proposed Action – Electric Transmission System	IV	Moderate	Meets

**Table 5-141**  
**Proposed Action and Power Generating Alternatives Conformance with Visual Resource Management Class Objectives**

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KOP No. and Name/Associated Alternative	VRM Class	Contrast Rating	Conformance
<b>39 - Hurricane Cliffs Road – View to South (St. George FO)</b>			
Proposed Action	IV	Very Strong <sup>2</sup>	Meets
Proposed Action – Electric Transmission System	IV	Strong	Meets
<b>40 - Hurricane Cliffs – From Unnamed Off-Highway-Vehicle Road (St. George FO)</b>			
Proposed Action	IV	Strong	Meets
Proposed Action – Electric Transmission System	IV	Moderate	Meets
Source: Logan Simpson Notes: KOP = key observation point; VRM =Visual Resource Management Class <sup>1</sup> Shaded areas denote alternatives that would not meet VRM Classes management objectives. Meets VRM Class IV management objectives but requires additional mitigation.			

### 5.3.16.2.5 Existing Highway Alternative.

This section addresses direct and indirect effects on visual resources for the Existing Highway Alternative in addition to the determination for conformance with management objectives. The following subsections qualitatively describe the potential direct effects on the VAUs and views from sensitive viewing platforms from the proposed Existing Highway Alternative alignment (Table 5-136). Effects are described from east to west. Many of the assessment units in this alternative have an identical magnitude of change to units in the Proposed Action. Table 5-142 catalogs the simulations by name and number; provides the KOP at which each simulation was generated; and provides the VAU in which each simulation was located for the Existing Highway Alternative. In addition Table 5-143 summarizes the direct effects on the landscape character and to the views from the sensitive viewing platforms.

#### 5.3.16.2.5.1 Summary of Direct, Short-term Effects from the Existing Highway Alternative on Landscape Character.

Like the Proposed Action, ground disturbing activities associated with construction of the pipeline would remove a band of existing vegetation approximately 120 feet wide. A slightly smaller 110-foot-wide disturbance would occur along the short stretch of smaller pipeline that extends from the primary penstock to the future Kane County WTP. Two of the five VAUs in the Existing Highway Alternative would be directly affected by project facilities, including the future Kane County WTP in VAU 9 and HS-2 Hwy facility in VAU 15. The clearing of sage-scrub vegetation on the proposed facility sites would create large rectangular shapes in the characteristic landscape in areas void of cultural modifications associated with rural development and would result in varying degrees of visual contrast.

Two staging areas approximately 23.3 acres and 29.8 acres in size would be constructed in VAU 9, which would increase the area of disturbance in the existing landscape. These sites would not remain in permanent use but would require clearing of vegetation in large rectangular shapes. The contrast from staging areas would diminish over time.

The degree of contrast with existing vegetation that would be created by the project would depend primarily on the height, texture/pattern, or color of the vegetation. Areas with low to medium height vegetation would more effectively obstruct views of the disturbance. The height of the vegetation is generally low to medium in each of the five VAUs that the Existing Highway Alternative would pass through (VAUs 9, 11, 13, 14, and 15). This Alternative would generally contrast more with existing vegetation that is dense and even in texture/pattern, because the lines and form of the pipeline disturbance would be more distinct. The vegetative texture/pattern in VAUs 9, 11, 13, 14, and 15 is generally dense and/or even.

The color of the existing vegetation would also influence the degree of contrast that the proposed pipeline and related project components area of disturbance would create. Color contrast would be increased in areas with stippled to patchy pinyon/juniper vegetation, which is found in varying densities in VAUs 9, 11, 13, 14, and 15. The irregular patterns of dark green vegetation in these existing landscapes contrast with the surrounding desert scrub vegetation. If bands of the dark green vegetation were removed, the irregular patterns would be bisected by a regular pattern with distinct lines and forms that would contrast with the existing vegetative patterns.

Table 5-142 Visual Simulation Listing for the Existing Highway Alternative		
KOP No.	Simulation Name/Subject	Corresponding VAU Number
31	Kaibab Paiute Tribal Headquarters	13- Potter Canyon Unit
32 Linear	Hydro Station 2 (Highway) Eastbound from Highway 389	15- Colorado City / Hildale Unit
32 Linear	Hydro Station 2 (Highway) Westbound from Highway 389	15- Colorado City / Hildale Unit

Source: Logan Simpson Design Inc.  
Note: KOP = key observation point; VAU = visual assessment unit

The ground-disturbing activities would affect the landform throughout the area of potential effect by exposing lighter soils, which would contrast with the adjacent soils and vegetation. Effects on rock formations would occur throughout the area of potential effect, but would be most notable in VAU 11 as the proposed waterline would cross the Shinarump Cliffs and Kanab Creek and across Cedar Ridge and Cottonwood Wash in VAU 15. These effects would range from a subtle to notable change in the characteristic landscape in the short-term. In addition, the level of change would increase in areas where the alignment passes over rolling or vertical landforms because the disturbance would intermittently be elevated and would more directly face the viewer. The VAUs with predominately flat to gentle rolling terrain occur in VAUs 9, 11, 13, 14, and 15.

Existing cultural modifications within the VAUs would also affect the amount of contrast that the proposed pipeline and related project components area of disturbance would create. The existing cultural modification in the five VAUs associated with the Existing Highway Alternative consists of rural homes, infrastructure, and businesses associated with Fredonia, Kanab, the Kaibab Paiute Tribal Headquarters, and PSNM visitor center. The proposed pipeline and related project components area of disturbance would also parallel existing roads and/or pipeline/penstock alignments throughout much of the area of potential effect. The lines and form of the pipeline and penstock disturbance would be similar to the lines and forms of the existing paved roads and would create a subtle degree of change in the setting with the cultural modifications in these areas. The Existing Highway Alternative would generally parallel existing roads, pipelines, or both through each of the five VAUs that the Existing Highway Alternative passes through.

The varying degrees of change in the setting from the proposed pipeline and related project components area of disturbance throughout the area of potential effect would result in differing magnitudes of change in the foreground and middleground of the VAUs along the Existing Highway Alternative. The magnitude of change in the setting in the foreground in the short-term would be low in VAUs 11, 13, and 14 because the ground disturbance during construction would not attract attention. The magnitude of change in the foreground for VAU 9 and 15 would be moderate in the short-term and would attract attention because of the disturbance associated with the large areas of clearance for the staging areas and the Kane County WFT, and HS-2 Hwy facilities.

<b>Table 5-143</b> <b>Summary of Direct Impacts by VAU/Platform for the Existing Highway- Water Pipeline Alternative</b>					
No .	Visual Assessment Unit (VAU) / Sensitive Viewing Platform	Short-Term		Long-Term	
		Foreground	Middleground	Foreground	Middleground
<b>9</b>	<b>Kanab/Vermilion Cliffs<sup>1</sup></b>	<b>Moderate<sup>2</sup></b>	<b>Very Low</b>	<b>Moderate</b>	<b>Very Low</b>
	KOP 24 <sup>3</sup>	NP	Very Low	NP	Very Low
	KOP 25	Moderate-	Very Low	High	Very Low
	Dominguez-Escalante HT	Moderate	Very Low	Low	Low
	Old Spanish NHT <sup>4</sup>	NP	Very Low	NP	Very Low
	Honeymoon HT	Moderate	Very Low	Low	Low
	Highway 89A	Moderate	Very Low	Low	Low
<b>11</b>	<b>Kanab/Fredonia/Lost Springs Wash</b>	<b>Low</b>	<b>Very Low</b>	<b>Low</b>	<b>Very Low</b>
	Dominguez-Escalante HT	NP	NV	NP	NV
	Old Spanish NHT	Low	Very Low	Low	Very Low
	Fredonia-Vermilion Cliffs Scenic Road/Highway 89A	NP	Very Low	NP	Very Low
<b>13</b>	<b>Shinarump Cliffs</b>	<b>Low</b>	<b>Low</b>	<b>Low</b>	<b>Low</b>
	KOP 31	Low	Low	Low	Very Low
	Dominguez-Escalante HT	NP	Low	NP	Very Low
	Old Spanish NHT	Low	Low	Low	Very Low
	Honeymoon HT	Low	Low	Low	Very Low
	Highway 389	Low	Low	Low	Very Low
<b>14</b>	<b>Potter Canyon</b>	<b>Low</b>	<b>Low</b>	<b>Low</b>	<b>Low</b>
	Old Spanish NHT	Low	Low	Low	Very Low
	Honeymoon HT	Low	Low	Low	Very Low
	Highway 389	Low	Low	Low	Very Low
<b>15</b>	<b>Cottonwood Wash</b>	<b>Moderate</b>	<b>Very Low</b>	<b>Moderate</b>	<b>Very Low</b>
	KOP 32	Moderate-	Very Low	High	Low
	KOP 33	Moderate	Very Low	High	Low
	Old Spanish NHT	Moderate	Very Low	High	Low
	Highway 89	Moderate	Very Low	High	Low
	County Road 239	Moderate	Very Low	High	Low

Source: Logan Simpson  
Notes:  
(1) Italicized text denotes the magnitude of the potential change in the characteristic landscape.  
(2) Very Low = negligible/none, Low =subtle/weak, Moderate = notable/ moderate, High = substantial/strong, Very High = severe/very strong, NP= not present, NV= not visible  
(3) Gray shading denotes the magnitude of the potential effect on views from sensitive viewing platforms.  
(4) NHT= National Historic Trail, HT= Historic Trail.

### ***5.3.16.2.5.2 Summary of Direct Long-term Effects on Landscape Character from the Existing Highway Alternative.***

This section summarizes the direct, long-term effects in the foreground and middleground distance zones from the proposed pipeline alignment and facilities as planned for the Existing Highway Alternative. The direct, long-term effects for the magnitude of change in the landscape character in the foreground and middleground for each VAU are listed in Table 5-136. The proposed pipeline and related facilities would introduce vertical lines and rectangular forms that would contrast with the lines and forms of the natural settings that would be in operation for the life of the Existing Highway Alternative.

A low/subtle magnitude of change would occur in VAUs 11, 13, and 14 in the foreground and VAUs 13 and 14) in the middleground. Because the lines and forms of the facilities would be similar to those of the existing landscape, the degree of contrast would be weak and would not attract attention. The existing visual elements and patterns of the cultural modifications (i.e., existing transmission lines, highway, and development associated with the communities of Kanab and Fredonia) present within this VAU would diminish the visual prominence of the proposed water pipeline. In the middleground, the Existing Highway Alternative would not be visually evident and would result in a negligible magnitude of change in the characteristic landscape in the long-term in VAUs 9, 11, and 15.

The magnitude of change to VAUs 9 and 15 from proposed pipeline and related facilities would be moderate/notable in the foreground. Although the Existing Highway Alternative would add distinct vertical lines and forms to the landscape, they would be similar to lines and forms of the adjacent cultural modifications. The future Kane County WTP in VAU 9 and the HS-2 South in VAU 15 would contrast to a moderate degree with the existing landscape and would attract attention in the foreground of the respective VAUs.

### ***5.3.16.2.5.3 Summary of Direct Effects on Views from Sensitive Viewing Platforms from the Existing Highway Alternative.***

The direct effects in the foreground and middleground distance zones from sensitive viewing platforms in the Existing Highway Alternative are listed in Table 5-136 and are summarized in this section. There would be a very low or negligible level of contrast when viewed from many of the platforms, primarily in the middleground distance zone. The Existing Highway Alternative would not be visually evident and would have a very low level of contrast when viewed from the middleground from KOPs 24 and 25 in VAU 9, KOP 31 in VAU 13, from the Dominguez-Escalante HT in VAU 13, from the Old Spanish NHT in VAUs 11, 13, and 14, Honeymoon HT in VAUs 13 and 14, Highway 389 in VAUs 13 and 14, and the Fredonia-Vermilion Cliffs Scenic Road/Highway 89A in VAU 11.

There would be a low or weak degree of contrast created by the waterline and associated facilities when viewed from KOP 31 in VAU 13, the Old Spanish NHT in VAUs 9, 11, 13, and 14, Honeymoon HT in VAUs 9, 13, and 14, Highway 89A in VAU 9, Fredonia-Vermilion Cliffs Scenic Road/Highway 89A in VAU 11, and Highway 389 in VAUs 13 and 14 in the foreground. The Existing Highway Alternative would also have a low magnitude of change and weak contrast in middleground from the Old Spanish NHT, Honeymoon HT, and Highway 89A in VAU 9 and each of the 5 platforms in VAU 1 in VAU 9 and each of the 5 platforms in VAU 15. The Existing Highway Alternative when viewed from these platforms would not attract attention and would be generally compatible with the setting.

Seven of the viewing platforms in two different VAUs would be subject to a strong level of contrast and high degree of change to the views. The proposed project facilities would begin to dominate the foreground views from the Old Spanish NHT in VAU 9, and KOPs 32 and 33, the Old Spanish NHT, Highway 89, and County 239 in VAU 15. Both the future Kane County WTP in VAU 9 and the HS-2 South would create a strong level of contrast in each of these platforms.

### **5.3.16.2.5.4 Effects on Scenic Roads and Byways.**

#### **Fredonia-Vermilion Cliffs Scenic Road/Highway 89A**

The Existing Highway Alternative would be in the middleground of the Fredonia-Vermilion Cliffs Scenic Road/Highway 89A. The cultural modifications associated with the town of Fredonia would diminish the visual prominence of the proposed waterline. The landscape character would remain intact with no apparent change. The Existing Highway Alternative would create a very low/negligible level of contrast and there would be no effect on the designated scenic road.

#### **Zion Park Scenic Byway/Highway 9**

The Existing Highway Alternative would be greater than five miles from the Zion Park Scenic Byway; therefore there would be no effect on the designated scenic byway.

### **5.3.16.2.5.5 Effects on Historic Trails.**

Effects on the historic trails in the area of potential effect would be dependent on the accurate location of the trails, which is currently unknown. Effects are therefore discussed based on the currently available data.

#### **Old Spanish NHT**

The Existing Highway Alternative would cross the Armijo Route of the Old Spanish NHT a total of 12 times; 8 times alone in VAU 11. This alternative would parallel the NHT within the foreground of the trail for approximately 38.7 miles and the middleground for about 4.4 miles. The magnitude of potential effect on foreground views from the NHT would range from low in VAU 9, 11, 13, and 14 because it would be consistent with the existing linear form of Highways 89A and 389 to high in VAU 15. The Existing Highway Alternative would attract attention, create strong contrast, and would begin to dominate the landscape in the foreground of the NHT near the HS-2 South facilities in VAU 15. When the Existing Highway Alternative is viewed in the middleground of the Old Spanish NHT, the magnitude of direct effects would be either low or very low in the long-term.

#### **Dominguez-Escalante Historic Trail**

The Existing Highway Alternative would not present in the foreground of the Dominguez-Escalante HT of VAUs 9, 11, and 13. When this alternative is viewed in the middleground of the Dominguez-Escalante HT in VAUs 9 and 13, the magnitude of direct effects would be very low in the short-and long-term. The project components would be in the middleground of this HT but would not be visible from the Dominguez-Escalante HT in VAU 11 based on the bare-earth visibility analysis.

#### **Honeymoon Historic Trail**

The Existing Highway Alternative would be viewed from the foreground and from the middleground of the Honeymoon HT from VAUs (9, 13, and 14). This alternative would cross the trail in two locations, one in VAU 9 and once in VAU 14. Approximately 16.3 miles of the HT would be within the foreground of the proposed waterline with unobstructed visibility. The potential changes to the characteristic landscape when viewed in the foreground or middleground of this HT would be low or very low because the lines and forms of the project components would be consistent with the existing linear form of Highways 89A and 389 in VAUs 9, 13, and 14.

## **Temple Historic Trail**

The Existing Highway Alternative would be greater than five miles from the Temple HT; therefore there would be no effect on this trail.

### **5.3.16.2.5.6 Effects on ACECs.**

Five ACECs (Shinarump, Johnson Spring, Kanab Creek, Moonshine Ridge, and Lone Butte) that have scenic resources identified as a resource relevant to the ACEC are located within the foreground and/or middleground of the Existing Highway Alternative. None of these five ACECs would be crossed by the proposed waterline. Approximately 0.6 of a mile of the proposed pipeline alignment would cross the foreground of the Shinarump ACEC, but would not be visible according to the bare-earth visibility analysis. Approximately 6.7 miles of the Existing Highway Alternative may be visible within the middleground from this ACEC. The remaining four ACECs (Johnson Spring, Kanab Creek, Moonshine Ridge, and Lone Butte) would only be potentially visible within the middleground,

Approximately 6.4 miles of the Existing Highway Alternative may be visible in the middleground from Johnson Spring, 2.9 miles from Kanab Creek, 4.5 miles from Moonshine Ridge, and 6.5 miles from Lone Butte. This alternative would create very low, short-and long-term, direct effects on middleground views because of the low landscape modification and weak level of contrast that would be created by the project components.

### **5.3.16.2.5.7 Effects on WAs and WSAs.**

The Cottonwood Canyon WA would be within the visual resources area of potential effect of the Existing Highway Alternative; the project components would not physically cross any of these areas nor would cross within the foreground of this WA. Approximately 1.3 miles of the Existing Highway Alternative including the HS-2 (Hwy) facility may be visible within a portion of the middleground distance zone from the Cottonwood Canyon WA based on the bare-earth visibility analysis. The potential effects on views from this WA, however, would be very low because the changes from the Existing Highway Alternative would be similar in line, form, color, and texture to the existing cultural modifications in the area of potential effect. The Existing Highway Alternative would have no apparent change to middleground views from the Cottonwood Canyon WA from which the project components may be visible. The potential effect on middleground views from the Cottonwood Canyon WA of the Existing Highway Alternative would be very low, direct, short- and long-term effects.

### **5.3.16.2.5.8 Effects on National Monuments.**

## **Pipe Springs National Monument**

Approximately 0.5 miles of the Existing Highway Alternative may be visible in the foreground from the PSNM and about 1.6 miles in the middleground views from the Monument. From that foreground and middleground distances, the potential effects on the views from the PSNM would be consistent with the existing linear form of Highway 389 and would range from very low to low, direct long-term effects.

## **Vermilion Cliffs National Monument**

The Existing Highway Alternative would be greater than five miles from the VMNM; therefore there would be no effect on this Monument.

### **5.3.16.2.5.9 Effects on Special Recreation Management Areas.**

Two RMAs may potentially have views of the Existing Highway Alternative and are located within the foreground and/or middleground distance zone of the project alignment: Arizona Strip ERMA and Fredonia

SRMA. From the views from the Arizona Strip ERMA and Fredonia SRMA the potential magnitude of change in the setting would range from very low to low, direct, short- and long-term effects based on the negligible to subtle change in the characteristic landscape as noted in VAUs 9, 11, 13, and 14. The presence of the HS-2 Hwy facility would attract attention and be visually prominent in the setting, which would create a moderate, direct, short-and long-term effect in the foreground and a very low direct, short-and long-term effect in the middleground.

#### ***5.3.16.2.5.10 Effects on Sand Hollow State Park.***

The Existing Highway Alternative would be greater than five miles from the Sand Hollow State Park; therefore there would be no effect on this trail.

#### ***5.3.16.2.5.11 Effects on Kaibab Paiute Indian Reservation.***

Foreground views from the Kaibab-Paiute Indian Reservation would be limited to approximately 16.3 miles of the Existing Highway Alternative. The lines and form of the pipeline disturbance would be similar to the lines and forms of the existing highway and other unpaved roads in the vicinity. The project components would create a subtle degree of change in the setting and would be visually subordinate to other elements in the setting. The Existing Highway Alternative would result in a low, direct short-term and long-term effect in the foreground of the Kaibab-Paiute Indian Reservation. From that middleground distance from the Kaibab-Paiute Indian Reservation, views of the project components would not be visually evident. The magnitude of effects on the views from the Kaibab-Paiute Indian Reservation would be negligible because the Existing Highway Alternative would not be discernible and there would be no apparent change to the setting.

As previously mentioned, the SPAC based on discussions with the Kaibab Paiute Tribal Council identified 17 culturally important resources within the area of potential effect for visual resources. Of the 17, 11 may be within the foreground of the Existing Highway Alternative, four within the middleground, and two in the background from the project components. The 11 culturally important resources within the foreground of the Existing Highway Alternative would generally be located in VAUs 9, 11, and 13. Depending on visibility, the project components would range from subordinate to visually prominent features in the setting and would create subtle to notable degrees of change in the characteristic landscape in the foreground. Therefore the effects to the characteristic landscape of the 11 culturally important resources within the foreground of the Existing Highway Alternative would range from low to moderate, direct, short-and long-term effects.

The four culturally important resources in the middleground of the Existing Highway Alternative are generally located within VAUs 13 and 14. In the middleground, the South Pipeline Alternative would create a negligible effect on the setting in the short-and long-term to the remaining 4 culturally important resources because the project components would not be visually evident or perceived in the characteristic landscape.

The remaining two cultural important resources would appear to be more than 5 miles away from the Existing Highway Alternative. It would not be likely that the proposed waterline would be visually discernible from that distance during construction or operation. Therefore, the landscape character would remain intact with no apparent change to the setting as viewed from these two resources.

#### ***5.3.16.2.5.12 Effects on Navajo Indian Reservation.***

The Existing Highway Alternative would be greater than five miles from the Navajo Nation; therefore there would be no visual resources effect on the Nation.

### **5.3.16.2.5.13 Conformance with BLM VRM Objectives.**

The Existing Highway Alternative would not traverse across BLM-administered lands. Therefore conformance with BLM VRM objectives would not apply.

### **5.3.16.2.6 Southeast Highway Alternative.**

This section addresses direct and indirect effects on visual resources under the Southeast Corner Alternative. The following subsections qualitatively describe the potential direct effects on the VAUs from the proposed Southeast Corner Alternative alignment (Table 5-136). Effects are described from east to west, and the effects are summarized in Table 5-144.

<b>Table 5-144 Summary of Direct Impacts by VAU/Platform for the Southeast Corner Alternative</b>					
No.	Visual Assessment Unit (VAU)	Short-Term		Long-Term	
		Foreground	Middleground	Foreground	Middleground
12	Jacob Canyon/Kanab Creek/Pipe Valley <sup>1</sup>	Moderate <sup>2</sup>	Very Low	Moderate	Very Low
	KOP 28	NP	Very Low	NP	Very Low
	KOP 29	NP	Very Low	NP	Very Low
	Dominguez-Escalante HT <sup>4</sup>	NP	Very Low	NP	Very Low

Source: Logan Simpson  
Notes:  
<sup>(1)</sup> Italicized text denotes the magnitude of the potential change in the characteristic landscape.  
<sup>(2)</sup> Very Low = negligible/none, Low =subtle/weak, Moderate = notable/ moderate, High = substantial/strong, Very High = severe/very strong, NP= not present, NV= not visible  
<sup>(3)</sup> Gray shading denotes the magnitude of potential effect on views from sensitive viewing platforms.  
<sup>(4)</sup> HT= Historic Trail.

Table 5-145 catalogs additional simulations for the Southeast Corner Alternative by name and number; provides the KOP at which each simulation was generated; and lists the VAU in which each simulation is located.

### **5.3.16.2.6.1. Summary of Direct, Short-term Effects from the Southeast Corner Alternative on Landscape Character.**

This section summarizes the direct, short-term effects in the foreground and middleground distance zones from the proposed pipeline alignment as planned for the Southeast Corner Alternative. There would be no other project facilities such as booster pump stations or staging areas proposed with this alternative. The direct, short-term effects for the magnitude of change in the landscape character in the foreground and middleground for VAU 12 is listed in Table 5-136. These potential effects would be the same as the short-term effects on the foreground and middleground views from the sensitive viewing platforms.

**Table 5-145**  
**Visual Simulation Listing for the Southeast Corner Alternative**

KOP No.	Simulation Name/Subject	Corresponding VAU Number
31	Kaibab Paiute Tribal Headquarters	13- Potter Canyon Unit
32 Linear	Hydro Station 2 (Highway) Eastbound from Highway 389	15- Colorado City / Hildale Unit
32 Linear	Hydro Station 2 (Highway) Westbound from Highway 389	15- Colorado City / Hildale Unit

Source: Logan Simpson Design Inc.

Note: KOP = key observation point; VAU = visual assessment unit

#### **5.3.16.2.6.2. Summary of Direct, Long-term Effects from the Southeast Corner Alternative on Landscape Character.**

Like the Proposed Action, ground disturbing activities associated with construction of the pipeline would remove a band of existing vegetation approximately 120 feet wide. Ground-disturbing activities would remove a uniform vegetation low to medium in height and density, expose lighter soils, and cut through several deeply incised washes. The existing 500 kV transmission line is a dominating feature that attracts attention within VAU 12. The potential effects from the Southeast Corner Alternative would draw attention from the natural setting and would create a notable degree of change in the characteristic landscape because of the introduction of distinct lines into the landscape in the foreground in VAU 12. In the middleground views of this Alternative the magnitude of change to the landscape and the level of contrast would be negligible because the project components would not be discernible features in the setting. Therefore, the Southeast Corner Alternative would create moderate, direct long-term, effects in the foreground and very low, direct long-term direct effect in the middleground of VAU 12.

#### **5.3.16.2.6.3 Summary of Direct Effects on Views from Sensitive Viewing Platforms from the Southeast Corner Alternative.**

No sensitive viewing platforms would be present in the foreground of VAU 12 in this alternative. The direct effects in the middleground distance zones from sensitive viewing platforms in the Southeast Corner Alternative are described in more detail in Table 5-136. The Southeast Corner Alternative would not be visually evident and would have a very low level of contrast when viewed from the middleground from KOPs 28 and 29, and from Dominguez-Escalante HT in VAU 12; therefore, for the Southeast Corner Alternative, there would be a very low, direct long-term effect when viewed from platforms in the middleground distance zone.

#### **5.3.16.2.6.4 Effects on Scenic Roads and Byways.**

##### **Fredonia-Vermilion Cliffs Scenic Road/Highway 89A**

The Southeast Corner Alternative would be greater than five miles from the Fredonia-Vermilion Cliffs Scenic Road/Highway 89A; therefore there would be no effect on the designated scenic road.

##### **Zion Park Scenic Byway/Highway 9**

The Southeast Corner Alternative would be greater than five miles from the Zion Park Scenic Byway; therefore there would be no effect on the designated scenic byway.

### **5.3.16.2.6.5 Effects on Historic Trails.**

Effects on the historic trails in the area of potential effect would be dependent on the accurate location of the trails, which is currently unknown. Effects are therefore discussed based on the currently available data.

#### **Old Spanish NHT**

The Southeast Corner Alternative would be greater than five miles from the Armijo Route of the Old Spanish NHT; therefore there would be no effect on the NHT.

#### **Dominguez-Escalante Historic Trail**

The Southeast Corner Alternative would be visible from the Dominguez-Escalante HT in the middleground in VAU 12. When this alternative is viewed in the middleground of the HT, the magnitude of direct effects would be very low in the long-term.

#### **Honeymoon Historic Trail**

The Southeast Corner Alternative would be greater than five miles from the Honeymoon HT; therefore there would be no effect on the HT.

#### **Temple Historic Trail**

The Southeast Corner Alternative would be greater than five miles from the Temple HT; therefore there would be no effect on this trail.

### **5.3.16.2.6.6 Effects on ACECs.**

Two ACECs (Shinarump and Kanab Creek) that have scenic resources identified as a resource relevant to the ACEC are located within the middleground of the Southeast Corner Alternative. None of these two ACECs would be crossed by the proposed waterline or within the foreground view of either ACEC. Approximately 0.5 mile of the proposed pipeline alignment would be visible according to the bare-earth visibility analysis in the middleground view from the southern portion of Shinarump ACEC. Approximately 0.4 mile of the Southeast Corner Alternative may be visible within the middleground from the Kanab Creek ACEC. This alternative would create very low, short-and long-term, direct effects on middleground views because of the low landscape modification, limited visibility, and weak level of contrast that would be created by the project components.

### **5.3.16.2.6.7 Effects on WAs and WSAs.**

The Southeast Corner Alternative would be greater than five miles from any WA or WSA; therefore there would be no effect on these special management areas.

### **5.3.16.2.6.8 Effects on National Monuments.**

#### **Pipe Springs National Monument**

The Southeast Corner Alternative would be greater than five miles from the PSNM; therefore there would be no effect on the Monument.

#### **Effects on Vermilion Cliffs National Monument**

The Southeast Corner Alternative would be greater than five miles from the VMNM; therefore there would be no effect on this Monument.

#### ***5.3.16.2.6.9 Effects on Special Recreation Management Areas.***

The Arizona Strip ERMA may potentially have views of the Southeast Corner Alternative within the foreground and middleground distance zone of the project alignment. From the views from this ERMA the potential magnitude of change in the setting would range from moderate in the foreground to very low, direct, short- and long-term effects based on the moderate to negligible change in the characteristic landscape as noted in VAU 12.

#### ***5.3.16.2.6.10 Effects on Sand Hollow State Park***

The Southeast Corner Alternative would be greater than five miles from the Sand Hollow State Park; therefore there would be no effect on this park.

#### ***5.3.16.2.6.11 Effects on Kaibab Paiute Indian Reservation.***

Foreground views from the Kaibab-Paiute Indian Reservation would be along the entire approximately 3.7 miles of the Southeast Corner Alternative. The potential effects from the Southeast Corner Alternative would draw attention from the natural setting and would create a notable degree of change in the characteristic landscape because of the introduction of distinct lines into the landscape in the foreground in the VAU. In the middleground, this alternative would create a negligible magnitude of change in the characteristic landscape. Therefore the Southeast Corner Alternative would result in a moderate, direct short-and long-term effect in the foreground and a very low, direct short- and long-term effect in the middleground from the Kaibab-Paiute Indian Reservation.

As previously mentioned, the SPAC based on discussions with the Kaibab Paiute Tribal Council identified 17 culturally important resources within the area of potential effect for visual resources. Of the 17, two may be within the middleground of the Southeast Corner Alternative. The two culturally important resources in the middleground of the Southeast Corner Alternative are generally located within VAU 12. In the middleground, the South Pipeline Alternative would create a negligible effect on the setting in the short-and long-term to these two culturally important resources because the project components would not be visually evident or perceived in the characteristic landscape.

The remaining 15 cultural important resources would appear to be more than 5 miles away from the Southeast Corner Alternative. It would not be likely that the proposed waterline would be visually discernible from that distance during construction or operation. Therefore, the landscape character would remain intact with no apparent change to the setting as viewed from these two resources.

#### ***5.3.16.2.6.12 Effects on Navajo Indian Reservation.***

The Southeast Corner Alternative would be greater than five miles from the Navajo Nation; therefore there would be no visual resources effect on the Nation.

#### ***5.3.16.2.6.13 Conformance with BLM VRM Objectives.***

Approximately 0.3 mile of the Southeast Corner Alternative would cross BLM-administered land with a VRM Class IV designation. There were no KOPs identified for this specific area of the Arizona Strip FO. Based on the magnitude of change in the characteristic landscape as well as the potential effects to views from Kaibab-Paiute Indian Reservation, the Southeast Corner Alternative would conform to Class IV objectives.

### **5.3.16.2.7 No Lake Powell Water Alternative.**

The No Lake Powell Water Alternative would have major, long-term effects on visual resources in the St. George metropolitan area. Eliminating outdoor watering of traditional landscapes with culinary water would result in transitioning to desert landscapes (except in areas served by secondary water supply).. Construction of the reverse osmosis water treatment facility, pump stations, Warner Valley Reservoir embankment dam and reservoir surface, brine evaporation ponds, and electrical transmission lines near the Washington Fields Diversion would have major changes on visual elements of line, form, color and texture in the foreground viewed from the Southern Corridor Highway (both directions) and middleground viewed from various points in the Virgin River Valley.

### **5.3.16.2.8 No Action Alternative.**

The No Action Alternative would have no effects on visual resources in the St. George metropolitan area.

## **5.3.16.3 Protection, Mitigation and Enhancement Measures**

Mitigation measures to reduce the potential effects on visual resources from the Proposed Action and other alternatives construction and maintenance have been identified. The following protection and mitigation measures for the alternatives and additional mitigation measures would be required on a site-specific basis: mitigation measures would apply to project construction and restoration activities for all action alternatives. Additional site-specific mitigation may be required to further reduce visual resource effects from pipeline construction and associated activities and to meet land management objectives. Any site-specific mitigation measures, if needed, will be developed using the design and construction details provided in the Plan of Development.

### **5.3.16.3.1 Protection and Mitigation Measures.**

Mitigation measures would be implemented to avoid or minimize adverse effects on visual resources under the Proposed Action, Existing Highway Alternative, and Southeast Corner Alternative. UDWRe would do the following:

- Use seed mixes that include species similar to those currently residing in the natural plant communities of the Existing Highway Alternative disturbance area to facilitate the recovery of the pre-construction plant community. Use native seed mixes on lands managed by GSENM.
- Monitor the success of revegetation for an initial three years, with an additional two years determined after evaluation of the initial three-year monitoring period.
- Slash from vegetation removal should be mulched and spread to cover fresh soil disturbances (preferred) or should be buried. Slash piles should not be left in sensitive viewing areas...
- Clear additional trees in juniper areas to create uneven, natural appearing openings in vegetative cover adjacent to the pipeline and penstock alignments.
- Feather trees and shrubs along the edge of the right-of-way to create variations in density and creating by uneven edges, to minimize the linear effect of right-of-way clearing.
- Blend new plantings with natural vegetation at the edges, and configure new plantings to match existing vegetation patterns and provide horizontal and vertical diversity.
- Retain existing vegetation that screens pipeline and penstock alignments, flow-control facilities, parking lots and other features from key viewing areas to the extent feasible.
- Where possible, ROWs and roads within a corridor should follow the edges of clearings (where they would be less conspicuous) rather than passing through the center of clearings.

- Because visual effects are usually lessened when vegetation and ground disturbances are minimized, siting within a corridor should take advantage of existing clearings to reduce vegetation clearing and ground disturbance.
- Segregate topsoil as available from the trench line and spoil storage area for the entire length of the Existing Highway Alternative.
- Strip, stockpile, and stabilize topsoil from site before excavating earth for facility construction.
- Topsoil from cut/fill activities should be segregated and spread on freshly disturbed areas to reduce color contrast and aid rapid revegetation. Topsoil piles should not be left in sensitive viewing areas.
- Disposal of excess fill material downslope should be avoided in order to avoid creating color contrast with existing vegetation/soils.
- Restore disturbed areas to match existing and characteristic landforms. This recontouring would apply to all existing landforms, including rounding of cut slopes along maintenance roads, pipeline and penstock alignments and streambanks/washes to blend with surrounding natural contours. Restored slopes exceeding 6:1 would be stabilized using erosion control materials and techniques.
- Specify use of rock staining on exposed rock surfaces to blend with the surrounding rock formations.
- Specify use of soil staining on exposed soil surfaces in selected areas to blend with the surrounding undisturbed soils.
- Shape rock cut slopes to emulate adjacent rock formations.
- Salvage surface boulders for relocation and placement in the disturbance area to simulate pre-construction conditions.
- Use pitting and vertical mulching in sensitive locations to reduce contrast and visibility of the pipeline and penstock corridors and discourage vehicular access along the disturbed areas.
- Design and locate structures and roads to minimize and balance cuts and fills. Reducing cut and fill has numerous visual benefits, including fewer fill piles, landform and vegetation that appears more natural, fewer or reduced color contrasts with disturbed soils, and reduced visual disturbance from erosion and the establishment of invasive species.
- Final width of access roads should be on what is necessary to provide access post-construction.
- For road construction, excess fill should be used to fill uphill-side swales to reduce slope interruption that would appear unnatural and to reduce fill piles. Road-cut slopes should be rounded, and the cut/fill pitch should be varied to reduce contrasts in form and line; the slope should be varied to preserve specimen trees and nonhazardous rock outcroppings.
- Benches should be provided in rock cuts to accent natural strata.
- Sculpt and shape natural or previously excavated bedrock landforms when excavation of these landforms are required. Integrate percent backslope, benches, and vertical variations into final landform that repeats the natural shapes, forms, textures, and lines of the surrounding landscape. Integrate and transition the earthen landform into the excavated bedrock landform. Sculpted rock face angles, bench formations, and backslope need to adhere to the natural bedding planes of the natural bedrock geology.
- Construction on wet or frozen soils should be avoided to reduce erosion.
- Contour soil borrow areas, cut and fill slopes, berms, waterbars, and other disturbed areas to approximate naturally occurring slopes, thereby avoiding form and line contrasts with the existing landscapes. Contouring to rough texture would trap seed and discourage off-road travel, thereby reducing associated visual effects.

- Randomly scarify and roughen cut slopes to reduce texture contrasts with existing landscapes and aid in revegetation.
- Constructed berms would be shaped to mimic the lines, forms and textures of the existing landscape.
- Materials and surface treatments of facilities should repeat and/or blend with the existing form, line, color, and texture of the landscape.
- Grouped structures should all be painted the same color to reduce visual complexity and color contrast.
- Minimize facility site sizes and fenced areas to minimize footprints of sites.
- Control nighttime lighting at aboveground facility sites by using shielded and down-casting fixtures and motion detection switches using full-shielded, full-cutoff, and down casting fixtures.
- Lighting for facilities should not exceed the minimum required for safety and security.
- Install rock riprap material on dam structures to be similar to surrounding landforms.
- Select exterior finish, color and texture of buildings and other structures to blend with the characteristic landscape. Paint colors would be specified to blend in with the existing landscape colors as closely as possible. Colors would be selected in coordination with the BLM for facilities on BLM-administered lands, with the NPS for facilities on NPS-administered lands, and with Reclamation for facilities on Reclamation-administered lands.
- Low-profile structures should be chosen whenever possible to reduce their visibility.
- Installation of gravel and pavement should be avoided where possible to reduce color and texture contrasts with the existing landscape. Temporary but necessary gravel and other surface treatments should be removed or buried once no longer needed.
- The color of gravel access roads should blend with the existing landscape colors.
- Specify use of non-specular finish components for all facilities and associated parts at substations.
- Transmission line towers and poles with non-reflective gray or natural rust surface would be installed where required by federal land management agencies.
- Transmission line contractors would be required to use only conductors and wires with a nonspecular surface finish.
- New roads created to access tower sites would be revegetated but not restored to original contours, in the event that emergency access is needed to a tower location or for periodic inspection and maintenance activities. This will reduce the extent of surface disturbance that is evident on a long-term basis.
- Areas disturbed during construction that are not required for permanent access roads or for maintenance areas around structures (transmission towers and substations) will be restored and revegetated.
- Staging areas, pulling and tensioning sites are temporary facilities that will only be needed during the construction process. Upon completion of construction these will be restored.
- Coordinate with the BLM to make sure that construction, operation and maintenance of the pipeline, penstock and associated aboveground facilities in Class II areas would be consistent with the objectives and guidelines of Class II and III areas.
- Mitigate to meet scenery objectives of specially designated lands that the LPP Project crosses.
- A site reclamation plan should be in place prior to construction. Reclamation of the construction ROW should begin immediately after construction of a given segment to reduce the likelihood of visual contrasts associated with erosion and invasive weed infestation and to reduce the visibility of affected

areas as quickly as possible. Interim restoration should be undertaken as soon as possible after disturbances.

- Visual effect mitigation objectives and activities should be discussed with equipment operators before construction activities begin.
- Existing rocks, vegetation, and drainage patterns should be preserved to the maximum extent possible.
- Signage and markers should be minimized. Reverse sides of signs and mounts should be painted or coated to reduce color contrasts with the existing landscape. Markers should be only as tall as necessary to be seen and those along roads should be installed parallel to travel on road. No reflective or yellow or white signs/markers should be used.

#### **5.3.16.3.2 Protection and Mitigation Measures – No Action Alternative.**

No mitigation measures would be implemented as part of the No Action Alternative.

#### **5.3.16.4 Cumulative Effects**

##### **5.2.16.4.1 Proposed Action.**

The Proposed Action visual resource effects would have minor cumulative effects when combined with the effects of the Southern Corridor Highway construction and operation, Kern-River-Hurricane Natural Gas Pipeline, and BLM St. George Field Office Resource Management Plan and Amendments. The cumulative effects of the Existing Highway Alternative along with these projects would not result in a noticeable change in the overall visual setting of the area of potential effect. These interrelated actions are primarily located within or near developed areas of the local communities where the landscape has been modified. The visual effects of the Existing Highway Alternative would be similar to these interrelated actions and would be generally consistent with the form, line, color and texture of the existing modified landscape; therefore, when considered along with past, present, and reasonably foreseeable projects in the area of potential effect, the Existing Highway Alternative would result in minor adverse cumulative effects on visual resources.

##### **5.3.16.4.2 Existing Highway Alternative.**

The Existing Highway Alternative visual resource cumulative effects would be the same as described for the Proposed Action in Section 5.3.16.4.1. One additional cumulative effect could occur when combined with the effects of the Jackson Flat Reservoir. The visual resource effects of the Existing Highway Alternative in the area of potential effect near the Jackson Flat Reservoir would have moderate short-term cumulative effects on the characteristic landscape because of changes in line, form, color and texture introduced as a result of land disturbance caused by both projects. The cumulative effects would diminish over time as the Existing Highway Alternative alignment becomes revegetated in the area of potential effect near the Jackson Flat Reservoir.

##### **5.3.16.4.3 Southeast Corner Alternative.**

The Southeast Corner Alternative visual resource cumulative effects would be the same as described for the Proposed Action in Section 5.3.16.4.1.

##### **5.3.16.4.4 Electrical Transmission System.**

The electrical transmission lines system visual resource cumulative effects would be the same as described for the Proposed Action in Section 5.3.16.4.1.

#### **5.3.16.4.5 No Lake Powell Water Alternative.**

The No Lake Powell Water Alternative visual resource cumulative effects would occur when combined with the effects of the Southern Corridor Highway construction and operation near the Washington Fields Diversion. The visual resource effects of constructing and operating the reverse osmosis water treatment facility, pump stations, Warner Valley Reservoir embankment dam and reservoir, brine evaporation ponds, and electrical transmission lines would result in long-term cumulative effects when combined with the visual effects of the Southern Corridor Highway construction and operation.

#### **5.3.16.4.6 No Action Alternative.**

The No Action Alternative would result in no cumulative effects to visual resources.

### **5.3.16.5 *Unavoidable Adverse Effects***

#### **5.3.16.5.1 Proposed Action.**

Unavoidable adverse effects of the Proposed Action on visual resources would include effects from all permanent aboveground features and changes to existing rock formations. Proposed aboveground features such as the intake facility, pump station facilities, regulation tank, hydro facilities, the forebay reservoir, afterbay reservoir, and electrical transmission lines and towers would have a sustained effect on the landscapes where they would be constructed. These effects would last for the life of the project and possibly longer, and would have long-term unavoidable adverse effects. Changes to rock formations would create a permanent change to the landscape, which would permanently alter the characteristic landscape.

#### **5.3.16.5.2 Existing Highway Alternative.**

The unavoidable adverse effects for the Existing Highway Alternative would be the same as described for the Existing Highway Alternative in Section 5.3.16.5.1.

#### **5.3.16.5.3 Southeast Corner Alternative.**

The unavoidable adverse effects for the Southeast Corner Alternative would be the same as described for the Proposed Action in Section 5.3.16.5.1.

#### **5.3.16.5.4 Electrical Transmission System.**

The unavoidable adverse effects for the electrical transmission lines system would be the same as described for the applicable features of the Proposed Action in Section 5.3.16.5.1.

#### **5.3.16.5.5 No Lake Powell Water Alternative.**

Unavoidable adverse effects under the No Lake Powell Water Alternative would include potential effects from permanent aboveground features and potential changes to existing rock formations. Proposed aboveground features associated with the No Lake Powell Water Alternative would have a sustained effect on the landscapes where they would be constructed and operated. These effects would last for the lives of these No Lake Powell Water Alternative features and possibly longer. Changes to rock formations would create a permanent change in the landscape, which would permanently alter the characteristic landscape. These effects on visual resources would be long-term unavoidable adverse effects.

### **5.3.16.5.6 No Action Alternative.**

The No Action Alternative would result in no unavoidable adverse effects to visual resources.

### **5.3.16.6 References**

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