

To: Incardine, Joseph[jincardi@blm.gov]
Cc: Staszak, Cynthia[cstaszak@blm.gov]; Matthew J Betenson[mbetenso@blm.gov]; Amber Hughes[ahughes@blm.gov]; Harry Barber[hbarber@blm.gov]; Ellen Hopp[ellen.hopp@galileoaz.com]
From: Angus, Allysia
Sent: 2017-03-09T12:42:38-05:00
Importance: Normal
Subject: Re: Lake Powell Pipeline project- Meeting this Friday
Received: 2017-03-09T12:43:13-05:00
[16 - Visual Resources Study Report FINAL conformance pages.pdf](#)
[Visual Resources Study Report FINAL KOP13 Toadstools TH Contrast Rating.pdf](#)
[Visual Resources Study Report FINAL KOP14 Toadstools TH Contrast Rating.pdf](#)
[Visual Resources Study Report FINAL KOP20 HS-1 Contrast Rating.pdf](#)
[Visual Resources Study Report FINAL KOP28 Kanab Creek Contrast Rating.pdf](#)

Cindy,

I just reviewed the VRM Final Study Report provided by Maria at Galileo on a thumbdrive (much appreciated and easy to work with).

According to this document the following locations are noted as not meeting VRM objectives:

KOP 13 - Pipeline east along Highway 89 near Toadstools Trailhead (GSEMN)
KOP 14 - Pipeline West of Toadstools Trailhead (GSENM)
KOP 20 - HS-1 from Highway 89 (GSENM)
KOP 28 - Pipeline Kanab Creek {Kanab Creek ACEC} (AZ Strip FO)

I have attached the pages from the report that detail this information, including the visual contrasting rating sheets.

Regarding BPS-3 (Alt) on KFO, it appears that the VRM Class objective was changed (I'm assuming in the last RMP revision) from Class 3 to Class 4. So there is a sliver of Class 4 between the GSENM boundary and the SITLA parcel that is now VRM Class 4 where BPS-3 (Alt) is situated.

Also of note as the EIS is being prepared, the cumulative effects section of this study report seems to focus primarily on the St George portions of the project. (b)(5) DPP

[REDACTED]

On Wed, Mar 8, 2017 at 9:43 AM, Incardine, Joseph <jincardi@blm.gov> wrote:

Thanks all for your help with our nailing this down. I'm working with the State's first party contractor, Stantec, who I'm providing this information to...

Thanks, Joe

Joe Incardine
BLM National Project Manager
Stationed in Salt Lake City
Cell: 801-560-7135

On Tue, Mar 7, 2017 at 3:49 PM, Staszak, Cynthia <cstaszak@blm.gov> wrote:

Allysia:

We are trying to finalize the discussion on the possibility of needing Plan Amendments due to the need to change VRM class for LPP alternatives.

The Kanab Field Office and the St. George Field Office have both looked at the materials provided in the PLP and determined that NO Plan Amendments will be needed, including any for VRM reasons.

From your chart attached, we still have concerns and uncertainty about the pipeline alignment at Toadstools and Cockscomb and we indicate that we would definately need a Plan amendment for the Hydro Station on GSENM and possibly for part of the Garkane Transmission Line.

Have you found any more additional discussion in the current, revised materials or in your discussions during the field tour, to indicate that that the suggested mitigations are included to avoid the need for a possible plan amendment?

Cindy Staszak
Monument Manager
Grand Staircase-Escalante National Monument
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Fax: 435 644-1250

On Thu, Dec 8, 2016 at 2:59 PM, Angus, Allysia <aangus@blm.gov> wrote:

Hi Cindy et al.

Attached please find my best attempt to document which sites could warrant plan amendments related to VRM classifications on BLM lands for the LPP. I have consulted

with SGFO regarding the sites on their land base because I found it very challenging to understand which VRM class many of the developments were located on. In that consultation I also learned that their RMP allows for "flexibility" when applying VRM objectives and that is noted at the bottom of the chart.

Two locations are of definite concern (coded orange on chart):

1. BPS-4 (Alt) on 5+ acres of KFO is in a VRM III area. It is also the site the FO is attempting to have shifted to adjacent SITLA land. (Revised visualization is not included in revised study plan)
2. HS-1 4+ acres on GSENM is also a VRM III area. (Visualization is attached)

Both of these developments are noted in the VRM study report as needing "extraordinary mitigation measures" not yet defined in the proposed action in order to meet objectives due to the scale, size and proximity to the highway.

I've also flagged three additional developments/locations (b)(5) DPP

[REDACTED]

1. The Glen Canyon to Buckskin new 230 kV transmission line that would run partially through VRM II on GSENM.
2. The pipeline alignment near the Toadstools Trailhead.
3. The pipeline alignment and necessary rock removal through the Cockscomb.

(b)(5) DPP
[REDACTED]
[REDACTED]
[REDACTED]

As to BMPs - I provided an extensive list of these to be incorporated as well as suggested edits to what was included when we reviewed the Draft PLP. As I am not sure if I have seen the most current version of the proposed action, I am not confident they have been adopted. They were not incorporated into the 11.30.2015 version that I could find on the ftp site. I would like to suggest that the BMPs become requirements for construction. FERC has a term for these - something along the lines of our terms and conditions. BMPs can be ignored when it comes time for construction but conditions can't.

This is may be off topic and not appropriate for tomorrow's discussion but another thing came up in conversation with the FERC recreation lead on our field visit in September. It is the idea that we can include mitigation such as recreational developments into these type projects. I think we should consider including a bike path that runs at least from Page to Kanab (Lora's suggestion) and improvements to any other recreational amenities in the vicinity (we could devise a list).

Please let me know if you have question prior to our call tomorrow.

On Wed, Dec 7, 2016 at 5:39 PM, Staszak, Cynthia <cstaszak@blm.gov> wrote:

We now have a 9:30-10:30 pre LPP call with BLM only at a different #: (b) (5), (b) (6)
code: (b) (5), (b) (6)

During this call, we will discuss our BLM strategy/input for the 3 topics:

1. KFO proposal to move the pump station off of BLM land
2. St. George FO plan amendment requirements due to VRM
3. GSENM plan amendment requirements due to VRM

Amber & Allysia....I am looking to you to take the lead in the GSENM discussion. From your review of the LPP proposal that went to FERC from UDWR, are we going to need to amend the GSENM management plan for VRM class? If so, is there anything that can be integrated into the LPP proposal to avoid having to do a plan amendment? Is there any mitigation measures not already articulated that would keep the proposal within the VRM management class?

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----- Forwarded message -----

From: **Foley, Mark** <mfoley@blm.gov>

Date: Wed, Dec 7, 2016 at 2:33 PM

Subject: Re: Lake Powell Pipeline project- Meeting this Friday

To: Joseph Incardine <jincardi@blm.gov>

Cc: "Barber, Harry" <hbarber@blm.gov>, Ellen Hopp <ellen.hopp@galileoaz.com>, Cynthia Staszak <Cindy_Staszak@blm.gov>, Whitney Bunting <wbunting@blm.gov>, James Holland <jholland@blm.gov>, Daniel Alberts <dalberts@blm.gov>, "Harrington, Amanda" <asharrin@blm.gov>, Lorraine Christian <lmchrist@blm.gov>, Jane Childress <jchildre@blm.gov>, Christine Pontarolo <cfletcher@blm.gov>

Joe asked about a 2920 lease instead of a 2800 right-of-way. The 43 CFR 2920 regulations are written loosely to allow BLM to authorize certain facilities which are not specifically authorized under other laws - including uses not included under FLPMA Title V, as long as they are not specifically forbidden by other law.

However, FLPMA Sec. 501(a)(1) specifically lists pipelines and other facilities and systems for the storage and transportation or distribution of water, which seems to be most appropriate for the Lake Powell Pipeline proposal. Plus, I'm not sure what we'd gain by authorizing an ancillary facility under a 2920 lease instead of a 2800 right-of-way.

One additional question for BLM to consider is rent for the pipeline. As I've mentioned before, it is not clear to me that this facility would qualify for rental exempt status as a state-owned facility. This is because under 43 CFR 2806.14 regulations, Federal, State, and local government "do not have to pay rent for your use ... unless...it is for a municipal utility or cooperative whose principal source of revenue is customer charges, which could be considered the case here.

This was a fairly recent amendment to the regulations, and has meant rent is now due for organizations such as Water Conservancy Districts, even though they are considered a subset of local government.

I hope that information is useful. Regards. Mark

On Wed, Dec 7, 2016 at 12:42 PM, Joseph Incardine <jincardi@blm.gov> wrote:

Hi, Harry, thanks much for the email. (b)(5) DPP

Also, I've seen these very large ancillary facilities (don't have the dimensions handy but they can tell us that Friday Morning), but I've seen them authorized under a 2920 LEASE, instead of a ROW - Mark, please weigh in on that.

So it sounds like Kanab FO is willing to entertain a land exchange. As you know, they can take upwards of several years to administratively conduct an exchange, unless it of course had associated special legislation enacted.

Let's have an internal conference call number at 9:30 am Friday to discuss BLM's strategy for a half hour: (b) (5), (b) (6) ; (b) (5), (b) (6)

Thanks, Joe

Joe Incardine
BLM National Project Manager
Stationed in Salt Lake City
801-560-7135

> On Dec 7, 2016, at 9:42 AM, Barber, Harry <hbarber@blm.gov> wrote:
>

> Joe,
> thanks for arranging the meeting Friday. I thought I would take a moment and send you my thoughts on where the KFO stands in regards to the pumping station. The station is proposed to be located on a very small piece of BLM land adjacent to a very large State block. Having the station on us ties up time for several of our employees who would just as soon be relieved of this workload and allowed to work on items that are a higher priority for our office. It seems reasonable to consider moving the station a short distance to the east to keep it on State lands. I understand the State is planning on a solar farm being placed on the State block but it would appear that there is enough room to maintain the solar farm and place the station there. Do you have dimensions for the station? We have come up with two alternatives to the current proposed placement:

>

> (b)(5) DPP

[REDACTED]

>

> We look forward to discussing this with you in a pre meeting on Friday and later in the larger meeting. I will be staying back in Kanab and calling in but our assistant Manager, Whit Bunting, will be there in person at the meeting helping to represent us.

>

> HB

>

> --

> Harry Barber

> Kanab Field Office Manager

> Kanab, UT

> 435-644-1271

> 435-691-6630

--

Mark Foley

Kanab Field Office Realty Specialist

669 South Highway 89A

Kanab, Utah 84741

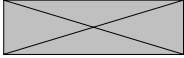
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Allysia Angus

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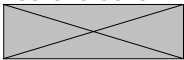
The Presidential Proclamation and the Antiquities Act provide a clear mandate-- to protect the myriad historic and scientific resources in the Monument. To meet this objective, the Monument will be managed according to two basic principles. First and foremost, the Monument will remain protected in its primitive, frontier state.

Second, the Monument will provide opportunities for the study of scientific and historic resources.

(GSENM Management Plan - 2000)

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Allysia Angus
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The Presidential Proclamation and the Antiquities Act provide a clear mandate-- to protect the myriad historic and scientific resources in the Monument. To meet this objective, the Monument will be managed according to two basic principles. First and foremost, the Monument will remain protected in its primitive, frontier state.

Second, the Monument will provide opportunities for the study of scientific and historic resources.

(GSENM Management Plan - 2000)

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.

4.4.14 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 4-8 Proposed Action and Power Generating Alternatives Conformance with Visual Resource Management Class Objectives			
KOP No. and Name/Associated Alternative	VRM Class	Contrast Rating	Conformance
11b BPS 3 (Alt) from Highway 89 (Kanab FO)			
Proposed Water Pipeline Alternative	IV	Strong	Meets
Proposed Power Generating Alternative Electric Transmission System	IV	Weak	Meets
Proposed Generating Alternative Natural Gas Generating System	IV	Strong	Meets
12b BPS 3 (Alt) from Cottonwood Road (GSENM)			
Proposed Water Pipeline Alternative	IV	Moderate	Meets
Proposed Power Generating Alternative Electric Transmission System	IV	None	Meets
Proposed Generating Alternative Natural Gas Generating System	IV	Strong	Meets
13 Highway 89 near Toadstools Trailhead (GSEMN)			
Proposed Water Pipeline Alternative ¹	II	Moderate	Does Not Meet
Proposed Power Generating Alternative Electric Transmission System	II	Weak	Meets
Proposed Generating Alternative Natural Gas Generating System	II	Moderate	Does Not Meet
14 Toadstools Trailhead (GSENM)			
Proposed Water Pipeline Alternative	II	Moderate	Does Not Meet
Proposed Power Generating Alternative Electric Transmission System	II	Weak	Meets
Proposed Generating Alternative Natural Gas Generating System	II	Moderate	Does Not Meet
15 Paria Contact Station (GSENM)			
Proposed Water Pipeline Alternative	II	Weak	Meets
Proposed Power Generating Alternative Electric Transmission System	II	None	Meets
Proposed Generating Alternative Natural Gas Generating System	II	Weak	Meets
19 Road To Paria Interpretive Site (GSENM)			
Proposed Water Pipeline Alternative	III	None	Meets
Proposed Generating Alternative Natural Gas Generating System	III	None	Meets

Table 4-8
Proposed Action and Power Generating Alternatives Conformance
with Visual Resource Management Class Objectives

KOP No. and Name/Associated Alternative	VRM Class	Contrast Rating	Conformance
20 HS 1 from Highway 89 (GSENM)			
Proposed Water Pipeline Alternative	III	Strong	Does Not Meet
Proposed Power Generating Alternative Electric Transmission System	III	Weak	Meets
Proposed Generating Alternative Natural Gas Generating System	III	Weak	Meets
21 High Point Regulation Tank 2 from Great Western Trailhead (GSENM)			
Proposed Water Pipeline Alternative	III	Weak	Meets
Proposed Power Generating Alternative Electric Transmission System	III	Weak	Meets
Proposed Generating Alternative Natural Gas Generating System	III	Weak	Meets
26 Shinarump Cliffs Overlook (AZ Strip FO)			
Proposed Water Pipeline Alternative	III	Weak	Meets
Proposed Generating Alternative Natural Gas Generating System	III	Weak	Meets
27 Dominguez Escalante and Honeymoon Trails Crossing (AZ Strip FO)			
Proposed Water Pipeline Alternative	III	Moderate	Meets
Proposed Generating Alternative Natural Gas Generating System	III	Moderate	Meets
28 Kanab Creek {Kanab Creek ACEC} (AZ Strip FO)			
Proposed Water Pipeline Alternative	II	Moderate	Does Not Meet
	III	Moderate	Meets
	IV	Moderate	Meets
Proposed Generating Alternative Natural Gas Generating System	II	Moderate	Does Not Meet
	III	Moderate	Meets
	IV	Moderate	Meets
29 Bitter Seeps Wash {Kanab Creek ACEC} (AZ Strip FO)			
Proposed Water Pipeline Alternative	IV	Moderate	Meets
Proposed Generating Alternative Natural Gas Generating System	IV	Moderate	Meets
30 Mount Trumbull Road (AZ Strip FO)			
Proposed Water Pipeline Alternative	IV	Weak	Meets
Proposed Generating Alternative Natural Gas Generating System	IV	Weak	Meets
35 Uzon Avenue/Canaan Wash (St. George FO)			
Proposed Water Pipeline Alternative	III	Moderate	Meets
Proposed Generating Alternative Natural Gas Generating System	III	Moderate	Meets
36 Canaan Gap (St. George FO)			
Proposed Water Pipeline Alternative	IV	None	Meets
Proposed Generating Alternative Natural Gas Generating System	IV	None	Meets

Table 4-8
Proposed Action and Power Generating Alternatives Conformance
with Visual Resource Management Class Objectives

KOP No. and Name/Associated Alternative	VRM Class	Contrast Rating	Conformance
37 Little Creek Overlook (St. George FO)			
Proposed Water Pipeline Alternative	IV	Strong	Meets
Proposed Power Generating Alternative Electric Transmission System	IV	None	Meets
Proposed Generating Alternative Natural Gas Generating System	IV	None	Meets
38 HS 4 (Alt) from Frog Hollow Road (St. George FO)			
Proposed Water Pipeline Alternative	IV	Strong	Meets
Proposed Power Generating Alternative Electric Transmission System	IV	Moderate	Meets
Proposed Generating Alternative Natural Gas Generating System	IV	None	Meets
39 Hurricane Cliffs Road View to South (St. George FO)			
Proposed Water Pipeline Alternative	IV	Very Strong ²	Meets
Proposed Power Generating Alternative Electric Transmission System	IV	Strong	Meets
Proposed Generating Alternative Natural Gas Generating System	IV	Weak	Meets
40 Hurricane Cliffs From Unnamed Off Highway Vehicle Road (St. George FO)			
Proposed Water Pipeline Alternative	IV	Strong	Meets
Proposed Power Generating Alternative Electric Transmission System	IV	Moderate	Meets
Proposed Generating Alternative Natural Gas Generating System	IV	None	Meets
Source: Logan Simpson. Notes: KOP = key observation point; VRM = Visual Resource Management class. ¹ Shaded areas denote alternatives that would not meet VRM Classes management objectives. ² Meets VRM Class IV management objectives but requires additional mitigation.			

4.5 Existing Highway Water Pipeline Alternative

This section addresses direct and indirect effects on visual resources for the Existing Highway Water Pipeline 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 Water Pipeline Alternative alignment (Table 4-2). 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 4-9 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 Water Pipeline Alternative. In addition, Table 4-10 summarizes the direct impacts to the landscape character and to the views from the sensitive viewing platforms.

VISUAL CONTRAST RATING WORKSHEET

Date: April 15, 2016
District: Grand Staircase-Escalante National Monument
Proposed Power Generating Alternative: Natural Gas Generating
Evaluators: Diane Simpson-Colebank, Chris Bockey

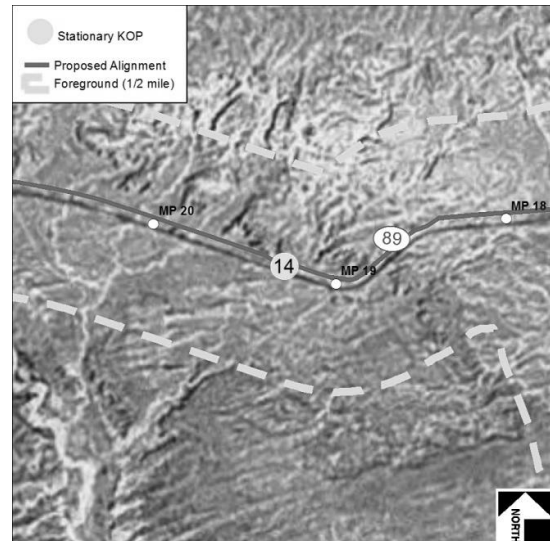
I. PROJECT INFORMATION

Project Name: Lake Powel Pipeline

KOP: 14 **VRM: Class 2**
 Toadstools Trailhead

Location: Township 43S Range 1W Section 2

Notes: Natural gas pipeline occurs within the foreground



II. CHARACTERISTIC LANDSCAPE DESCRIPTION

	Land/Waterbody	Vegetation	Structures
Form	Undulating w/ variety of distinct vertical landforms	Indistinct, low	Flat road, vertical utility poles
Line	Horizontal, undulating, irregular and complex	Complex, indistinct	Distinct, straight to curved, repeating vertical
Color	Brown/beige, gray/white, orange, red	Green to blue/gray, and seasonal colors incl. bright green and straw/yellow	Gray, brown/beige
Texture	Fine to coarse, striated, random	Fine to medium, stippled to gradational	Fine

III. PROPOSED ACTIVITY DESCRIPTION

	Land/Waterbody	Vegetation	Structures
Form	Undulating	Low	N/A
Line	Horizontal, undulating, linear	Broken, irregular	N/A
Color	Brown/beige, gray/white, orange, red, lighter where disturbed	Green to blue/gray, and seasonal colors incl. bright green and straw/yellow, bright green in disturbed areas	N/A
Texture	Fine, smooth	Fine to medium, stippled to gradational	N/A

VISUAL CONTRAST RATING WORKSHEET

IV. CONTRAST RATING KOP 14

	Land/Waterbody				Vegetation				Structures			
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Form												
ST	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
LT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Line												
ST	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
LT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Color												
ST	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
LT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Texture												
ST	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
LT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Note: ST = short term (0 - 1 year); LT = long term (5 - 10 years)

Summary and Recommendations

Does project design meet visual resource objectives? ☐ Yes ☒ No

Additional mitigation measures recommended? ☒ Yes ☐ No

Additional mitigation as included in Chapter 5, as well as site specific mitigation identified in POD.



View West from Toadstools Trailhead on US 89



View East from Toadstools Trailhead on US 89

VISUAL SIMULATION



Existing Conditions



Zero to One Year Post-Construction Conditions Simulation

VISUAL SIMULATION



Five to Ten Years Post-Construction Conditions Simulation

VISUAL CONTRAST RATING WORKSHEET

Date: April 15, 2016
District: Grand Staircase-Escalante National Monument
Proposed Water Pipeline Alternative(s): South Water Pipeline
Evaluators: Diane Simpson-Colebank, Chris Bockey

I. PROJECT INFORMATION

Project Name: Lake Powel Pipeline

KOP: 20 **VRM:** Class 3
 Hydro Station HS-1 From US 89

Location: Township 43S Range 3W Section 18

Notes: HS-1 and water pipeline occur in the foreground



II. CHARACTERISTIC LANDSCAPE DESCRIPTION

	Land/Waterbody	Vegetation	Structures
Form	Gently rolling	Indistinct, low to medium	Vertical utility poles, fence posts, horizontal power lines
Line	Horizontal, simple	Complex, indistinct	Straight, vertical and horizontal, parallel
Color	Brown/beige, orange	Green to blue/gray, and seasonal colors incl. bright green and straw/yellow	Gray, brown/beige
Texture	Fine	Medium to fine, clumped	Fine, uniform

III. PROPOSED ACTIVITY DESCRIPTION

	Land/Waterbody	Vegetation	Structures
Form	Rolling	More distinct, low to medium	More distinct vertical elements
Line	Horizontal, simple	Complex, more distinct	Increased amount of straight, vertical and horizontal
Color	Brown/beige, orange, lighter where scarred	Green to blue/gray, and seasonal colors incl. bright green and straw/yellow, bright green in scar	Gray, brown/beige; gray/silver fence
Texture	Fine	Medium to fine, clumped	Fine to medium

VISUAL CONTRAST RATING WORKSHEET

IV. CONTRAST RATING KOP 20

	Land/Waterbody				Vegetation				Structures			
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Form												
ST	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Line												
ST	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color												
ST	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Texture												
ST	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note: ST = short term (0 - 1 year); LT = long term (5 - 10 years)

Summary and Recommendations

Does project design meet visual resource objectives? ☐ Yes ☒ No

Additional mitigation measures recommended? ☒ Yes ☐ No

Additional mitigation as included in Chapter 5, as well as site specific mitigation identified in POD.



VISUAL SIMULATION



Existing Conditions



Immediately Post-Construction Conditions

VISUAL SIMULATION



Five to Ten Years Post-Construction

VISUAL CONTRAST RATING WORKSHEET

Date: April 15, 2016
District: Arizona Strip
Proposed Water Pipeline Alternative(s): South Water Pipeline
Evaluators: Diane Simpson-Colebank, Chris Bockey

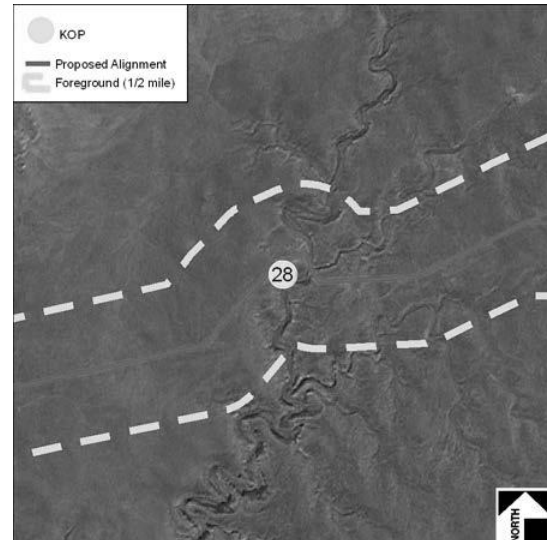
I. PROJECT INFORMATION

Project Name: Lake Powell Pipeline

KOP: 28 **VRM:** Class 2
 VRM: Class 3
 VRM: Class 4

Kanab Creek (Kanab Creek ACEC)

Location: Township 39N Range 3W Section 6
 Notes: Water pipeline occurs in the foreground



II. CHARACTERISTIC LANDSCAPE DESCRIPTION

	Land/Waterbody	Vegetation	Structures
Form	Flat to rolling with deeply cut wash/cliff faces	Indistinct, low to medium	Trapezoidal utility towers
Line	Horizontal, irregular, complex	Complex, indistinct	Straight, repeating vertical/horizontal/angular
Color	Brown/beige, gray/white, orange, red	Green to blue/gray, and seasonal colors incl. bright green and straw/yellow	Gray
Texture	Fine to coarse, striated	Medium to fine, stippled to even	Fine

III. PROPOSED ACTIVITY DESCRIPTION

	Land/Waterbody	Vegetation	Structures
Form	Flat to rolling with deeply cut wash/cliff faces, flattened vertical cliff faces	More distinct, low to medium	N/A
Line	Horizontal, vertical, regular, complex	Complex, more distinct	N/A
Color	Brown/beige, gray/white, orange, red, lighter where disturbed	Green to blue/gray, and seasonal colors incl. bright green and straw/yellow, bright green in disturbed areas	N/A
Texture	Fine to coarse, striated, increased fine texture	Medium to fine, stippled to even, increased fine texture	N/A

VISUAL CONTRAST RATING WORKSHEET

IV. CONTRAST RATING KOP 28

	Land/Waterbody				Vegetation				Structures			
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Form												
ST	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
LT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Line												
ST	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
LT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Color												
ST	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
LT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Texture												
ST	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
LT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Note: ST = short term (0 - 1 year); LT = long term (5 - 10 years)

Summary and Recommendations

Does project design meet visual resource objectives? ☒ Yes (Class 3 and 4) ☒ No (Class 2)

Additional mitigation measures recommended? ☒ Yes

☐ No
Additional mitigation as included in Chapter 5, as well as site specific mitigation identified in POD.



View Northeast from West Edge of Kanab Creek near
Proposed Pipeline Crossing



View Southeast from West Edge of Kanab Creek near
Proposed Pipeline Crossing



VISUAL SIMULATION



Existing Conditions



Zero to One Year Post-Construction Conditions Simulation



VISUAL SIMULATION (CONTINUED)



Five to Ten Years Post-Construction Conditions Simulation

VISUAL CONTRAST RATING WORKSHEET

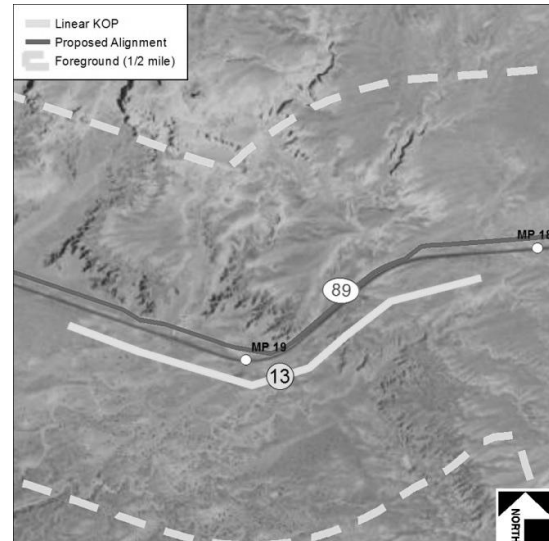
Date: April 15, 2016
District: Grand Staircase-Escalante National Monument
Proposed Power Generating Alternative: Natural Gas Generating
Evaluators: Diane Simpson-Colebank, Chris Bockey

I. PROJECT INFORMATION

Project Name: Lake Powel Pipeline

KOP: 13 **VRM: Class 2**
 Highway 89 Near Toadstools Trailhead

Location: Township 43S Range 1W Section 2
 Notes: Natural gas pipeline occurs within the foreground



II. CHARACTERISTIC LANDSCAPE DESCRIPTION

	Land/Waterbody	Vegetation	Structures
Form	Undulating w/ variety of distinct vertical landforms	Indistinct, low	Flat road, vertical utility poles
Line	Horizontal, undulating, irregular and complex	Complex, indistinct	Distinct, straight to curved, repeating vertical
Color	Brown/beige, gray/white, orange, red	Green to blue/gray, and seasonal colors incl. bright green and straw/yellow	Gray, brown/beige
Texture	Fine to coarse, striated, random	Fine to medium, stippled to gradational	Fine

III. PROPOSED ACTIVITY DESCRIPTION

	Land/Waterbody	Vegetation	Structures
Form	Undulating	Low	N/A
Line	Horizontal, undulating, linear	Broken, irregular	N/A
Color	Brown/beige, gray/white, orange, red, lighter where disturbed	Green to blue/gray, and seasonal colors incl. bright green and straw/yellow, bright green in disturbed areas	N/A
Texture	Fine, smooth	Fine to medium, stippled to gradational	N/A

VISUAL CONTRAST RATING WORKSHEET

IV. CONTRAST RATING KOP 13

	Land/Waterbody				Vegetation				Structures			
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Form												
ST	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
LT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Line												
ST	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
LT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Color												
ST	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
LT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Texture												
ST	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
LT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Note: ST = short term (0 - 1 year); LT = long term (5 - 10 years)

Summary and Recommendations

Does project design meet visual resource objectives? ☐ Yes ☒ No

Additional mitigation measures recommended? ☒ Yes ☐ No

Additional mitigation as included in Chapter 5, as well as site specific mitigation identified in POD.



View West from Toadstools Trailhead on US 89



View East from Toadstools Trailhead on US 89

VISUAL SIMULATION



Existing Conditions



Zero to One Year Post-Construction Conditions Simulation

VISUAL SIMULATION



Five to Ten Years Post-Construction Conditions Simulation