

Comment #	Original Comment	UDWRe Response	resource
NPS Cmt 1	<p>"The National Park Service has completed its review of the Environmental Analysis accompanying the Preliminary Licensing Proposal for the Lake Powell Pipeline, FERC Project No. P-12966. We appreciate having the opportunity to provide you with our thoughts and comments about how this project may affect units of the National Park System. Please see our attached comments located in Appendix A.</p> <p>Preliminary issues of concern include:</p> <ul style="list-style-type: none"> • Adequacy of water modeling regarding Glen Canyon National Recreation Area, Lake Powell levels and associated resource effects • Insufficient information provided regarding Aquatic Invasive Species (AIS) due to missing appendix • Efficacy of the AIS treatment protocols and the possibility of AIS introduction into other water bodies • Adequacy of noise and night sky analysis • Potential effects to Zion from Lake Powell Pipeline-related growth • Adequacy of information regarding effects to cultural resources, and impacts to the Old Spanish Trail" <p>NPS Comment Disposition</p>	<p>We are responding below to each numbered comment shown under the NPS comment disposition.</p> <p>1) NPS is correct that the GLCA would be directly affected by short-term construction noise of the pipeline, pump station construction, and transmission line construction. Noise abatement measures would be implemented to control construction equipment noise at the source (mufflers, etc.) to minimize short-term noise effects on GLCA.</p> <p>2) The noise from the operation of the intake pumping station and BPS-1 will be heard in limited portions of the GLCA and the level of noise and potential impacts is revised in the License Application and explained as follows. LPP operation would involve pumping water with electric-motor driven pumps at the Water Intake Pump Station (IPS) and Booster Pump Station One (BPS-1). Additional baffling materials would be installed within the interior walls of the IPS to control the noise levels at the IPS boundary fence to 45 dBA or lower. Additional baffling materials would be installed within the interior walls of the BPS-1 to control the noise levels at the BPS-1 boundary fence to 45 dBA or lower. The 45 dBA noise level at these LPP pump station boundary fences is consistent with research regarding chronic noise effects from industrial sources on wildlife cited in the literature review in Biol. Rev. (2016), 91:982-1005 "A synthesis of two decades of research documenting the effects of noise on wildlife" by Shannon, et al. and specifically by Blickley, et al. (2012) in Conservation Biology 26(3):461-471 "Experimental Evidence for the Effects of Chronic Anthropogenic Noise on Abundance of Greater Sage-Grouse at Leks." The long-term effects of 45 dBA noise levels at the fenced boundaries of IPS and BPS-1 on wildlife would be negligible, and minor long-term effects would occur on GLCA sound levels. Figure 5-213a shows the operating noise contours around IPS and BPS-1.</p>	

NPS Comment Disposition

The UDWR response contains the following contradictions and inaccuracies:

- 1) Contradiction: The UDWR response states that National Parks will not be directly impacted; however, the following sentence states that GLCA will be impacted by short term noise. If GLCA is impacted by short-term noise, then this is a direct effect to a National Park Service unit.
- 2) The intake and pumping station operations, if operating at the noise levels indicated in the PLP, will be heard within the GLCA; this, in addition to the short-term noise will also have a direct impact on the National Park Service unit.
- 3) GSENM should not be included in this UDWR response to the NPS as GSENM is not a unit of the NPS.

The NPS requests that UDWR revise their comment response and the corresponding text in the PLP to address the above points.

Sections 5.3.18.1 and 5.3.18.2, Chapter 5, Exhibit E of the License Application addressing the noise affected environment and environmental effects analyses are updated with this information. The first paragraph in Section 5.3.18.1.4, Chapter 5, Exhibit E of the License Application is revised to read: The mechanical equipment within each facility would be housed in noise attenuating buildings. Noise levels from IPS and BPS-1 on NPS-administered land operating within sound attenuating enclosures would not be greater than 45 dBA outside the perimeter fencing. Figure 5-213a (see attached PDF file to NPS Comment No. 1) shows the operating noise contours around IPS and BPS-1. Noise levels from facilities not on NPS-administered land (pump stations BPS-2, BPS-3 (Alt.) and BPS-4 (Alt.) and all hydro stations) operating within sound attenuating enclosures would not be greater than 60 dBA outside the perimeter fencing. 3) Potential noise effects on GLCA-administered land are analyzed separately from noise effects on GSENM-administered land.

The pump stations would include design input by a qualified noise control engineer, along with noise measurements conducted jointly by a qualified acoustical engineer and NPS staff, during initial pump station construction and testing, to make sure that low frequency tones and other potentially unreasonable noises are not audible on the lake or other visitor sites surrounding the pump station enclosures.

UDWR understands GSENM is not a unit of NPS.

noise

UDWR Response

resource

Comment #	Original Comment	UDWR Response	
NPS Cmt 31	The NPS requests additional text specific to NPS administered lands be added; currently, only text specific to BLM is present.	Please see the attached Extended Narrative document for the response to NPS Comment No. 31.	noise
NPS Cmt 90	The statement that noise would not exceed ambient conditions at pump stations directly contradicts Chapter 3 page 3-88 which shows large exceedances from ambient, with values approaching 70 dB at 500 feet. The NPS requests that additional analysis be conducted on noise impacts and also requests that the correct value be identified as is consistent through the document.	Please see the Extended Narrative document for the response to NPS Comment No. 90.	noise

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NPS Cmt 105	CFR regulations state sound not to exceed 60 dBA at 50 feet. All constructing equipment and noise will exceed that (although temporary effects). The NPS requests that the text describe how this noise impact will be mitigated.	Additional text as to how the noise would be mitigated is provided. A third sentence is added to the end of the first paragraph in Section 5.3.18.2.1, Chapter 5, Exhibit E of the License Application and reads: Noise standards for NPS-administered lands within Glen Canyon National Recreation Area and Pipe Spring National Monument are defined in 36 CFR 2.12(a)(1), which specifies that operating motorized equipment or machinery exceeding a noise level of 60 dBA at 50 feet is prohibited. The NPS-requested noise mitigation measures to reduce construction equipment noise within GLCA are included in a new first paragraph in Section 5.3.18.3.1, Chapter 5, Exhibit E of the License Application, which reads: Noise mitigation during construction would be required on NPS administered land in Glen Canyon National Recreation Area to minimize noise effects on visitors, wildlife and the park environment. Noise mitigation measures would include: UDWRe specifying newer, less noisy equipment; use mufflers on all construction equipment air intake and exhaust cycles to control source noise; install shields on equipment or use equipment with built in shields (e.g., compressors, etc.); dampen metal surfaces to absorb noise; install temporary noise shields or barriers along work areas; provide equipment operation training focused on achieving lower noise levels during equipment operation; require equipment maintenance programs focused on controlling equipment noise sources; restrict work hours; UDWRe specifying the type of helicopter used during transmission tower construction; and establish flight routes to minimize noise disturbance on sensitive receptors.	noise
NPS Cmt 106	Table 5-159 includes ambient sound levels for urban and suburban areas which are rarely found in the project area. It omits ambient sound levels for quieter rural areas typical of GLCA and nearby public lands. The NPS requests inclusion of site-specific ambient sound levels from the geospatial data found at this website: https://irma.nps.gov/DataStore/Reference/Profile/2217356 Natural ambient sound levels in the vicinity of the intake pump station and BPS-1 are estimated at 24-25 dBA, while existing ambient sound levels are estimated at 35-38 dBA. We request that these ambient sound levels be disclosed as measures of the affected environment in these areas.	Please see the Extended Narrative document for the response to NPS Comment No. 106.	noise
NPS Cmt 107	A background level cutoff is <50 dB is too high to accurately assess impacts on quiet areas. We request that the NPS geospatial ambient model be used to estimate background sound level. The data is publicly available at this website: https://irma.nps.gov/DataStore/Reference/Profile/2217356 Natural ambient sound levels in the vicinity of the intake pump station and BPS-1 are estimated 24-25 dBA, while existing ambient sound levels are estimated at 35-38 dBA. We request that these ambient sound levels be disclosed as measured of the affected environment.	Please see the Extended Narrative document for the response to NPS Comment No. 107.	noise

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NPS Cmt 108	<p>The chosen project noise impact threshold of 60 dBA is high and arguably inappropriate as a long-term (continuous) noise threshold for visitors and wildlife in GLCA. The standard, ANSI S12.40-1990, has been withdrawn and superseded by more applicable standards, including ANSI/ASA S12.9 Part 5 and ANSI/ASA S12.100-2004. We request a more robust noise analysis that better considers audibility of long-term noise from project facilities (pump stations and hydro stations) to GLCA wildlife and visitors. In a previous NPS comment, it was noted that wildlife responses to noise began at about 40 dBA. We request that you please reference the following citation and use our noise impact spreadsheet at this URL: http://onlinelibrary.wiley.com/doi/10.1111/brv.12207/supinfo [Shannon, G., M.F. McKenna, et al. (2015) "A synthesis of two decades of research documenting the effects of noise on wildlife." Biological Reviews DOI: 10.1111/brv.12207]</p>	<p>Please see the Extended Narrative document for the response to NPS Comment No. 108.</p>	noise
NPS Cmt 109	<p>The chosen project noise impact threshold of 60 dBA is highly and arguably inappropriate as a compatible use threshold at the perimeter fencing of project facilities (pump stations and hydro stations). The publicly available NPS geospatial ambient sound level model provides estimates of 24-25 dBA for natural ambient sound levels, and estimates of 35-38 dBA for existing ambient sound level in the vicinity of the intake pump station and BPS-1. We request additional noise mitigation of project facilities (pump stations and hydro stations) to further reduce noise levels and the area of audible impacts on NPS lands.</p>	<p>Please see the response to NPS Comment No. 27 for revisions made to Section 5.3.18.2.1.3, Chapter 5, Exhibit E of the License Application. Additionally, the response to NPS Comment No. 27 provides revisions made to Section 3.1.3.1.7, Chapter 3, Exhibit E of the License Application, with 45 dBA sound levels at the boundary fences of IPS and BPS-1, eliminating the need for additional noise mitigation measures on these pump stations to reduce noise levels and the area of audible effects on NPS-administered lands in GLCA. Please see UDWRe's response to NPS Comment No. 1 regarding design of pump stations.</p>	noise
NPS Cmt 110	<p>The statement that noise from access roads can be dismissed because existing traffic noise is 85 dBA along much of the project is extraordinary, as this noise level likely assumes a very close distance and a relatively brief maximum noise level. IT would not accurately represent longer term noise impacts over greater distances. We respectfully request that you include a more detailed analysis of how noise from highways would compare with access roads, including other metrics, e.g. L10 and L50, distance, vehicle type, and traffic count assumptions for the comparison.</p>	<p>Please see the Extended Narrative document for the response to NPS Comment No. 110.</p>	noise
NPS Cmt 111	<p>A 90 dBA impact threshold outside human occupied structures is very high. We respectfully request analysis of indoor noise impacts, including speech interference. This is especially important near NPS structures where interpretive activities with visitors may occur. If speech interference is expected to occur, we would request further mitigation of noise to minimize impacts on visitors.</p>	<p>Please see the Extended Narrative document for the response to NPS Comment No. 111.</p>	noise