

Comment # Label	NPS Original Commenter	Original NPS Comment	UDWRe March 31, 2017 Response	Additional NPS Comment	Additional NPS Comment Reviewer	UDWRe Updated Response
NPSCmt1	ELJ - NPS Glen Canyon National Recreation Area	<p>"The National Park Service +C2:F62has 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 The UDWR response contains the following contradictions and inaccuracies:</p> <p>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.</p> <p>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.</p> <p>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.</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 Bickley, 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> <p>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.</p> <p>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.</p> <p>UDWRe understands GSENM is not a unit of NPS.</p>	<p>Thank you. We appreciate the change in IPS and BPS-1 maximum fenceline noise level to 45 dBA in order to minimize potential for chronic noise effects on wildlife, as well as long-term effects to GLCA sound levels. In part because A-weighted noise levels discount low frequency contributions, we respectfully suggest additional measures to ensure pump station noise is not problematic and unreasonable. We suggest pump station design 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 ensure that low frequency tones and other potentially unreasonable noises are not audible on the lake or other visitor sites surrounding the pump station enclosures. Applicable standards may include 36 CFR 2.12 (a)(1)(ii) unreasonable noise criteria, ANSI/ASA S12.9-2016/Part 7, and others to be determined. If a qualified acoustical engineer or NPS staff identify unreasonable noise during construction, additional noise mitigation treatments should be added to prevent noise impacts on park visitors.</p>	E. Janicki	<p>The final paragraph of the UDWRe March 31, 2017 Response is revised as follows:</p> <p>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. Applicable standards may include 36 CFR 2.12 (a)(1)(ii) unreasonable noise criteria, ANSI/ASA S12.9-2016/Part 7, and others to be determined by NPS and UDWRe. If NPS acoustical engineering staff identify unreasonable noise during construction, UDWRe will discuss with NPS additional noise treatments that may be added to prevent noise impacts on park visitors.</p>

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NPSCmt27	RS - IMR-NR	The chosen project noise impact threshold of 60 A-weighted decibels (dBA) is high and arguably inappropriate as a long-term (continuous) noise threshold for visitors and wildlife in GLCA. According to section 5.3.18.2.1.3, this threshold is based on an outdated standard, ANSI S12.40-1990, which has been withdrawn and suspended by other more applicable standards, including American National Standards Institute (ANSI)/Acoustical Society of America (ASA) S12.9 Part 5 and ANSI/ASA S12.100-2014. We strongly suggest a revised noise analysis that better considers impacts to GLCA natural ambient sound levels, to visitors, and to wildlife.	Please see the Narrative Response document for the response to NPS comment No. 27.	NPS has reviewed the revised noise analysis in the March 31, 2017 comment response and agrees with the 45 dBA limit at the intake and BPS-1 boundary fences. NPS asks for clarifying language stating that the noise level would be at 45 dBA at the inner fence at the intake station or 50 feet from the intake station, whichever is closer, and at 45 dBA at 50 feet from the pump station.	E. Janicki	Please see the revised Extended Narrative document for the response to NPS comment No. 27.
NPSCmt28	ELJ - NPS Glen Canyon National Recreation Area	The text states that facility noise levels would be 70 decibels (dB) or less at 500 feet from the facility. This noise level is in violation Code of Federal Regulations (CFR) for sound (36 CFR 2.12(a)(1) which prohibits motorized equipment or machinery (such as an electric generating plant, motor vehicle, motorized toy, audio device) from exceeding 60 decibels measured on the A-weighted scale at 50 feet. The NPS requests that this level of noise impact to the soundscape need to be further analyzed with respect to visitor experience, effect on wildlife including birds, and in the context of the CFR violation. The NPS requests additional analysis and discussion of measures which will need to be implemented to muffle sounds from the intake and pump stations to be within acceptable levels per the CFR. The NPS also requests that mitigations be included requiring that all machinery and equipment have proper muffling systems in place and functioning and that equipment, vehicles, tools, and machinery will not be left idling or running unless necessary for safety reasons for if actively being used to complete a work-task to reduce noise-related impacts.	Additional text regarding noise mitigating measures and noise analysis is included in the License Application and existing language addressing NPS concerns is referenced. The text in Section 3.1.3.1.7, Chapter 3, Exhibit E of the License Application is revised to read: Potential facility noise levels would be estimated during facility design, and features would be incorporated to minimize normal operational noise levels with an objective of no more than 45 A-weighted decibels (dBA) or less at the boundary of the facility. In addition, please see the response to NPS Comment No. 27 and No. 105. In addition, the text also contains the following sentence: "Construction equipment would be operated conservatively, which means the operator would take special care not to throttle the engine excessively and would keep engine speed as low as possible. In addition, the operator would not leave the equipment running or idling needlessly." Please see UDWRe's response to NPS Comment No. 1 regarding design of pump stations.	Thank you. We appreciate the change in IPS and BPS-1 maximum boundary noise level to 45 dBA. In part because A-weighted noise levels discount low frequency contributions, we respectfully suggest additional measures to ensure pump station noise is not problematic and unreasonable. We suggest pump station design 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 ensure that low frequency tones and other potentially unreasonable noises are not audible on the lake or other visitor sites surrounding the pump station enclosures. Applicable standards may include 36 CFR 2.12 (a)(1)(ii) unreasonable noise criteria, ANSI/ASA S12.9-2016/Part 7, and others to be determined. If a qualified acoustical engineer or NPS staff identify unreasonable noise during construction, additional noise mitigation treatments should be added to prevent noise impacts on park visitors.	E. Janicki	In addition to the UDWRe March 31, 2017 response to NPS Comment No. 28, please see the updated response to NPS Comment No. 1.
NPSCmt107	RS - IMR-NR	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.	Thank you. We appreciate the inclusion of ambient sound levels from the NPS geospatial ambient model in Table 5-157. We respectfully request that the "peak levels" attributable to wind be clarified to ensure the dominant noise source is not microphone flow-induced noise (wind turbulence) and the requirements of ANSI 12.9-2013 Part 3, section 6.3 (b) maximum wind velocity are met.	R. Stanley	Please see the revised attached Narrative Response document for the response to comment NPS No. 107.

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NPSCmt109	RS - IMR-NR	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.	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.	Thank you. We appreciate the change in IPS and BPS-1 maximum boundary noise level to 45 dBA. In part because A-weighted noise levels discount low frequency contributions, we respectfully suggest additional measures to ensure pump station noise is not problematic and unreasonable. We suggest pump station design 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. If a qualified acoustical engineer or NPS staff identify unreasonable noise during construction, additional noise mitigation treatments should be added to prevent noise impacts on park visitors, according to 36 CFR 2.12 (a)(1)(ii).	R. Stanley	In addition to the UDWRe March 31, 2017 response to NPS Comment No. 109, please see the updated response to NPS Comment No. 1.
NPSCmt110	RS - IMR-NR	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.	Please see the Extended Narrative document for the response to NPS Comment No. 110.	We appreciate the additional analysis, which compares counts of annual averaged daily traffic volumes versus expected construction traffic. We respectfully suggest any additional analysis include both equivalent-continuous sound levels and maximum sound levels.	R. Stanley	Please see the revised attached Narrative Response document for the response to comment NPS No. 110.

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NPSCmt113	RS - IMR-NR	The NPS requests further analysis regarding withdrawals and what withdrawals might indicate about the variation/fluctuations in reservoir levels that will occur in addition to what already exists from normal operations and climate change. The effects, including cumulative effects, to cultural resources along the reservoir shoreline need to be considered and addressed in this document.	Please see the Extended Narrative document for the response to NPS Comment No. 113.	<p>NPS asks for additional clarification as to whether the cumulative effects between the action and no action are indeed the same, and if so, how.</p> <p>NPS asks for additional clarification on the influence of climate change on cumulative effects.</p> <p>The NPS understands that the “No Action” alternative assumes the existing water right is being utilized. However, the on-the-ground conditions today are that the water right is not currently being utilized. Therefore, effects from a utilization are not being seen on the ground. The “No Action” alternative should reflect present day conditions (that being the ~86,000 a-f which is not currently being utilized anywhere in the system). We understand that the modeling for the “No Action” alternative is assuming the utilization of the ~86,000 a-f at undisclosed locations within the watershed. The analysis does not reflect what changes would be seen between the current conditions today (water right not currently being utilized) with the Action Alternative (water right being utilized and withdrawn at a disclosed location). Perhaps, multiple scenarios under the “No Action” alternative which depicts the current on the ground conditions (water right not being utilized) as well as the utilization of the 86,000 a-f water right could help more accurately demonstrate what the true on-the-ground impacts will be of utilizing the existing water right compared to the on-the-ground conditions of the right not being utilized today. If absent the multiple scenarios, a statement in the EIS document which discloses very clearly that the current on-the-ground (no utilization) condition is not being represented in the “No Action” alternative should be included for clarity for the readers and to prevent confusion.</p>	E. Janicki	Please see the response to NPS Comment No. 51 in the revised Narrative Response document for a discussion on assumptions regarding use of the State of Utah's water rights in the various alternatives. Please see the response to NPS Comment No. 51 in the revised Narrative Response document to review the hydrological modeling performed by Reclamation on Lake Powell and for clarification regarding cumulative effects on surface water resources under climate change conditions. Please see the revised Narrative Response document for the response to NPS Comment No. 113 for clarification on cultural resources along the Lake Powell shoreline.