

Comment #	Original Comment	UDWRe Response	resource
NPS Cmt 60	<p>The intermittent definition does not fit well with the Colorado Plateau landscape. The intermittent streams in GLCA, as well as the dry washes, have very strongly defined geomorphology (typically deep canyons). Also, many desert aquatic organism are adapted to temporary aquatic habitat and spend the dry periods in egg or other desiccation resistant life stages. While in eggs stages the organisms are even dispersed to other temporary aquatic habitats (potentially dry at the time) by the wind. There are examples of aquatic organisms that require drying periods before they will continue with their development. The NPS request the inclusion of this information in this section and explain the inconsistencies of the intermittent stream definition that is used in the document in comparison with the existing circumstances and conditions.</p>	<p>Please see the Extended Narrative document for the response to NPS Comment No. 60.</p>	aquatics
NPS Cmt 61	<p>Zebra mussels (<i>D. polymorpha</i>) are not present in Lake Mead. Please correct this inaccuracy in the text.</p>	<p>Change made. The first paragraph of Section 5.3.6.1.5 LPP Intake Pump Station and Invasive Species Management, Chapter 5, Exhibit E of the License Application is revised to read: The proposed LPP water diversion from Lake Powell increases the probability that invasive mussel species could be transferred (biota transfer) to other drainages. The concerns relating to the effect of the quagga mussel (<i>Dreissena bugensis</i>) in Lake Mead are well documented. This problem has significantly affected operation of local domestic water intakes at the Lake, has resulted in the temporary closure of the Cold Water Fish Hatchery at Lake Mead, affected surface water withdrawals for the Central Arizona Project and the California water system, and has had a real effect on recreational use of the resources throughout the western United States and Canada.</p>	aquatics
NPS Cmt 62	<p>Please update the text to reflect that the NPS Integrated Pest Management Policies apply when on NPS lands. Annual pre-approval and reporting for pesticides as well as meeting storage requirements and limits are required and purchase, storage, and use of the biological molluscicide must meet these requirements.</p>	<p>The text is updated. The following sentence is added to the end of the last paragraph of Section 5.3.6.1.6, Chapter 5, Exhibit E of the License Application: NPS Integrated Pest Management Policies would apply to all facilities and activities on NPS lands. Annual pre-approval and reporting for pesticides would be required as would the requirements concerning storage requirements, usage limits, and quantity limits. The purchase, storage, and use of the biological molluscicide would be required to meet the NPS integrated Pest Management Policy proscriptions.</p>	aquatics
NPS Cmt 63	<p>"Gamete, veliger and post-veliger" are not standard larval life stage terminologies for Dreissen mussels. "Gametes" are unfertilized. "Veliger" is the general term. "Post-veliger" must be an adult. Typical terms used include trochophore, straight-hinged or D-shaped, umbonal, and pediveliger. Please update text to include correct terminology.</p>	<p>The text is updated as requested. The last sentence of the second paragraph of Section 5.3.6.1.5.1, Chapter 5, Exhibit E of the License Application is revised to read: Of significant interest for the LPP would be the potential bio-fouling effects on facilities such as the intake screen, water conveyance pipeline and initial pumping facilities which would primarily occur during the larval life-stage (egg, trochophore, straight-hinged, umbonal, and pediveliger) when the organisms are most motile.</p>	aquatics
NPS Cmt 64	<p>Please update text to reflect current infestation and reproduction status in Lake Powell as veligers (product of mussel reproduction/spawning) are being produced all year long in down-lake area (especially near the dam). Molluscicide dosing will likely be required all year.</p>	<p>The text is updated as requested. The eighth paragraph of Section 5.3.6.1.5.1 - Invasive Species Management, Chapter 5, Exhibit E of the License Application is revised and the following sentence is added after the sixth sentence of the paragraph: There is evidence that veligers are being produced all year long in the down-lake area (especially near the dam) and as such molluscicide dosing may be required all year.</p>	aquatics

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NPS Cmt 65	Early stages of Dreissena veligers will pass through a 100-micron filter and a filter of that size is not sufficient. The NPS requests that UDWR reconsider the filter size or potentially the tactic for preventing larval stage mussels from entering the system.	UDWRe is adjusting the filter size that would be utilized down to 25 microns. The last paragraph of Section 5.3.6.1.5.1 - Invasive Species Management in Chapter 5, Exhibit E of the License Application is revised to include the following sentence: Filters with a filter size of 25-microns would be used on each pump discharge pipe to remove biological materials (including residual dead mussel veligers) that pass through the fish screens and intake tunnels.	aquatics
NPS Cmt 66	The NPS requests that the following information is disclosed in the text: Rainbow Trout may incidentally move into the very lowest portion of the Paria River, but generally, their habitat is not present (too warm and silty). Rainbow trout incidentally enter the Paria River from their largest self-sustaining population in the Colorado River below Glen Canyon Dam.	The rainbow trout information is added to the text. The following sentence is inserted before the last sentence of the fourth to last paragraph of Section 5.3.6.1.2: Paria River Drainage, Chapter 5, Exhibit E of the License Application: Rainbow trout may incidentally move into the very lowest portion of the Paria River, but generally, their habitat is not present (too warm and silty). Rainbow trout incidentally enter the Paria River from their largest self-sustaining population in the Colorado River below Glen Canyon Dam.	aquatics